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OM protein - protein search, using sw model

Run on: June 28, 2005, 08:50:04 ; Search time 160 Seconds
(without alignments)
24.173 Million cell updates/sec

Title: US-09-350-401b-638
Perfect score: 54
Sequence: 1 QAFSPRYK 10

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2105692 seqs, 386760381 residues

Total number of hits satisfying chosen parameters: 2105692

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_16Dec04.*
1: Geneseqp1980s.*
2: Geneseqp1990s.*
3: Geneseqp2000s.*
4: Geneseqp2001s.*
5: Geneseqp2002s.*
6: Geneseqp2003as.*
7: Geneseqp2003bs.*
8: Geneseqp2004s.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Query	Score	Match	Length	DB	ID	Description
1	54	100.0	10	3	AA73007		Aay73007 Hepatitis
2	54	100.0	10	4	AA99222		Aam99222 Vaccine r
3	54	100.0	10	5	ABJ10023		Abj10023 Hepatitis
4	54	100.0	10	5	ABJ09911		Abj09911 Hepatitis
5	54	100.0	10	5	ABJ10167		Abj10167 Hepatitis
6	54	100.0	10	5	ABJ09660		Abj09660 Hepatitis
7	54	100.0	10	5	ABJ08176		Abj08176 Hepatitis
8	54	100.0	10	5	ABJ09778		Abj09778 Hepatitis
9	54	100.0	10	5	ABJ08514		Abj08514 Hepatitis
10	54	100.0	10	5	ABJ10067		Abj10067 Hepatitis
11	54	100.0	10	5	ABJ10117		Abj10117 Hepatitis
12	54	100.0	10	5	ABJ06455		Abj06455 Hepatitis
13	54	100.0	10	7	ADA49616		Ada49616 Multi-epi
14	54	100.0	10	8	ADK39666		Adk39666 Hepatitis
15	54	100.0	10	8	ADK37735		Adk37735 Hepatitis
16	54	100.0	10	8	ADK39049		Adk39049 Hepatitis
17	54	100.0	10	8	ADO23877		Ado23877 HBV HLA-B
18	54	100.0	11	5	ABJ06268		Abj06268 Hepatitis
19	54	100.0	11	5	ABJ07365		Abj07365 Hepatitis
20	54	100.0	11	5	ABJ08177		Abj08177 Hepatitis
21	54	100.0	11	8	ADK37565		Adk37565 Hepatitis
22	54	100.0	15	2	AAW85443		Aaw85443 Helper T-
23	54	100.0	15	3	AA72980		Aay72980 Hepatitis
24	54	100.0	15	5	ABJ10187		Abj10187 Hepatitis
25	54	100.0	15	5	ABJ10137		Abj10137 Hepatitis

26	54	100.0	15	5	ABJ09964	Abj09964 Hepatitis
27	54	100.0	15	5	ABJ08887	Abj08887 Hepatitis
28	54	100.0	15	5	ABJ09179	Abj09179 Hepatitis
29	54	100.0	15	5	ABJ10087	Abj10087 Hepatitis
30	54	100.0	15	5	ABJ10045	Abj10045 Hepatitis
31	54	100.0	15	5	ABJ09992	Abj09992 Hepatitis
32	54	100.0	15	8	ADK39254	Adk39254 Hepatitis
33	54	100.0	15	8	ADK39688	Adk39688 Hepatitis
34	54	100.0	15	8	ADO24053	Ado24053 HBV epitope
35	54	100.0	15	8	ADO23906	Ado23906 HBV HLA-D
36	54	100.0	123	7	ADA49425	Ada49425 Multi-epi
37	54	100.0	123	8	ADO24103	Ado24103 Epigene c
38	54	100.0	206	7	ADA49427	Ada49427 Multi-epi
39	54	100.0	206	8	ADO24105	Ado24105 Epigene c
40	54	100.0	206	8	ADO24060	Ado24060 Epigene c
41	54	100.0	219	7	ADA49429	Ada49429 Multi-epi
42	54	100.0	219	8	ADO24107	Ado24107 Epigene c
43	54	100.0	219	8	ADO24062	Ado24062 Epigene c
44	54	100.0	295	8	ADO24316	Ado24316 Epigene c
45	54	100.0	296	8	ADO24318	Ado24318 Epigene c

ALIGNMENTS

RESULT 1
AA73007
ID AA73007 standard; peptide; 10 AA.
XX
AC AA73007;
XX
DT 06-AUG-2003 (revised)
DT 28-FEB-2000 (first entry)
XX
DE Hepatitis B virus (HBV)-derived MHC class I (CTL) epitope, #165.
XX

KW Chimeric; pan DR epitope; expression vector; promoter;
KW major histocompatibility complex; MHC; targeting; peptide; epitope;
KW antigen; presentation; class I; cytosolic pathway; endoplasmic reticulum;
KW class II; extracellular antigen; endocytic pathway; helper T lymphocyte;
KW HLA; universal epitope; cytotoxic T lymphocyte; CTL; immune response;
KW immunogenicity; assay; vaccine; immunity; infection; pathogen; virus;
KW HIV; HBV; HCV; hepatitis B; hepatitis C; bacterium; protozoan;
KW tumour cell; autoimmune disease; activation; antiviral; antimalarial;
KW immunoprotective.

OS Synthetic.
OS Hepatitis B virus.

XX WO9958658-A2.

XX 18-NOV-1999.

PF 13-MAY-1999; 99WO-US010646.

XX 13-MAY-1998; 98US-00078904.

PR 15-MAY-1998; 98US-0085751P.

XX (EPIM-) EPIMUNE INC.

XX Fikes JD, Hermanson GG, Sette A, Ishioka GY, Livingston B;
PI Chestnut RW;

XX WPI; 2000-039103/03.

XX Expression vectors encoding major histocompatibility targeting sequence,
PT used as, e.g. tumor vaccines.

XX Claim 11; Page 64; 130pp; English.

CC Sequences AAY72988-Y73086 represent hepatitis B virus (HBV)-derived MHC
class I (CTL) epitopes which are claimed for use in the present
invention. The invention relates to a novel expression vector comprising

CC a promoter operably linked to a fusion gene encoding a major
 CC histocompatibility complex (MHC) targeting sequence, and two or more
 CC heterologous peptide epitopes. The MHC targeting sequence may be a class
 CC I targeting sequence, which directs an MHC class I epitope to a
 CC cytosolic pathway or to the endoplasmic reticulum, or an MHC class II
 CC targeting sequence, which directs extracellular antigens to enter the
 CC endocytic pathway to be processed into antigen peptides for presentation
 CC on MHC class II molecules. The heterologous epitopes may comprise either
 CC helper T lymphocyte (HTL) epitopes, or a cytotoxic T lymphocyte (CTL)
 CC epitope and a universal HTL epitope such as a pan DR epitope (PADRE). The
 CC vectors are useful for stimulating an immune response in vivo, as well as
 CC for use in assaying the human immunogenicity of a human T cell peptide
 CC epitope in vivo in a non-human mammal. They provide a nucleic acid
 CC vaccine for enhancing immunity against infectious pathogens, such as
 CC viruses (e.g., HIV, hepatitis B (HBV) and hepatitis C (HCV)) bacteria,
 CC protozoa (e.g., Plasmodium falciparum, the cause of malaria) and also
 CC tumor cells and autoimmune diseases. Universal MHC class II epitopes are
 CC advantageous when combined with other MHC class I and class II epitopes to
 CC increase the number of cells that are activated in response to a given
 CC antigen and provide a broader population coverage of MHC-reactive
 CC alleles. (Updated on 06-AUG-2003 to correct OS field.)
 XX
 SQ Sequence 10 AA;

Query Match 100.0%; Score 54; DB 3; Length 10;
 Best Local Similarity 100.0%; Pred. No. 0.0024;
 Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QATFSPTYK 10
 |||||
 Db 1 QATFSPTYK 10

RESULT 2
 AAM99222
 ID AAM99222 standard; peptide; 10 AA.

AC AAM99222;
 DT 07-DEC-2001 (first entry)
 DE Vaccine related MHC ligand peptide SEQ ID NO:325.

KW Glutamic acid; glutamine; vaccine; major histocompatibility complex; MHC;
 KW immunomodulator; antiallergic; endocrine; neuroprotectant; virucidal;
 KW bactericidal; antiparasitic; fungicidal; cytostatic; medicine;
 KW pharmaceutical; immune disorder; immune deficiency; autoimmune;
 KW hypersensitivity; allergy; graft rejection; infection; hormonal disorder;
 KW central nervous system disease; cancer; melanoma; anti-melanoma vaccine;
 KW human immunodeficiency virus.

OS Hepatitis B virus.

XX WO200170772-A2.

XX 27-SEP-2001.

XX 22-MAR-2001; 2001WO-FR000872.

XX 23-MAR-2000; 2000FR-00003711.

XX (FABR) FABRE MEDICAMENT SA PIERRE.

XX Klinguer-Hamour C, Corvaia N, Beck A, Goetsch L;

XX WPI; 2001-611470/70.

XX Stabilized pharmaceutical containing N-terminal glutamic acid or
 PT glutamine, useful e.g. in anti-melanoma vaccines, is an addition salt
 PT with strong acid.

XX Claim 9; Page 87; 149pp; French.

CC The present invention describes a pharmaceutical compound (I) that
 CC contains an N-terminal glutamic acid (Glu) or glutamine (Gln) residue in
 CC the form of an addition salt with a strong, physiologically acceptable
 CC acid (II). Also described are: (a) a pharmaceutical composition
 CC containing at least one (I); (b) a vaccine containing at least one (I)
 CC where this is a major histocompatibility complex (MHC) ligand (Ia); (c) a
 CC method for in vitro diagnosis of diseases associated with the presence of
 CC (Ia); (d) a kit for method (c) that includes a (Ia); and (e) a process
 CC for preparing (I). (I) has immunomodulator, endocrine, antiallergic, and
 CC neuroprotectant, virucidal, bactericidal, antiparasitic, fungicidal, and
 CC cytostatic activities. (I) are useful, in human or veterinary medicine,
 CC in pharmaceutical compositions (for treating immune disorders, e.g.
 CC immune deficiency, autoimmune states, hypersensitivity, allergy, graft
 CC rejection, infection, hormonal disorders and central nervous system
 CC diseases), also, where (I) is a MHC ligand (Ia), in vaccines for
 CC treatment or prevention of: (i) viral, bacterial, parasitic or fungal
 CC infections; or (ii) of cancers. A particular application is in anti-
 CC melanoma vaccines. (I) are also useful for in vitro diagnosis of diseases
 CC associated with interactions between MHC and (I), e.g. melanoma and human
 CC immunodeficiency virus infection. AAM98988 to AAM99592 represent peptides
 CC which can be used in pharmaceutical compounds from the present invention
 XX
 SQ Sequence 10 AA;

Query Match 100.0%; Score 54; DB 4; Length 10;
 Best Local Similarity 100.0%; Pred. No. 0.0024;
 Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QATFSPTYK 10
 |||||
 Db 1 QATFSPTYK 10

RESULT 3
 ABJ10023
 ID ABJ10023 standard; peptide; 10 AA.

AC ABJ10023;
 DT 14-NOV-2002 (first entry)
 DE Hepatitis B virus epitope #3975.

KW Hepatitis B virus; HBV; epitope; vaccine; HBV infection; hepatitis;
 KW virucide; hepatotropic; antiinflammatory.

OS Hepatitis B virus.

XX WO200219986-A1.

XX 14-MAR-2002.

XX 08-SEP-2000; 2000WO-US024802.

XX 08-SEP-2000; 2000WO-US024802.

XX (EPIM-) EPIMUNE INC.

XX (SETT/) SETTE A.

XX Sette A, Sidney J, Southwood S, Vitiello MA, Livingstone BD;
 PI Celis E, Kubo RT, Grey HM, Chesnut RW;

XX WPI; 2002-643192/69.

XX Vaccine composition for treating or preventing hepatitis B virus (HBV)
 PT infection, and/or for stimulating an immune response to HBV, comprises a
 PT HBV peptide epitope.

XX Example 4; Page 214; 228pp; English.

XX The present invention relates to a composition comprising at least one
 CC hepatitis B virus epitope. This can be used in the production of a
 CC vaccine for use in preventing or treating hepatitis B virus infection.

CC The present sequence is a peptide described in the exemplification of the
CC invention
XX
SQ Sequence 10 AA;
Query Match 100.0%; Score 54; DB 5; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0024;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 QAFTFSPYK 10
| | | | |
DB 1 QAFTFSPYK 10
RESULT 4
ID ABJ09911 standard; peptide; 10 AA.
XX
AC ABJ09911;
XX
DT 14-NOV-2002 (first entry)
XX
DE Hepatitis B virus epitope #3863.
XX
KW Hepatitis B virus; HBV; epitope; vaccine; HBV infection; hepatitis;
KW virucide; hepatotropic; antiinflammatory.
XX
OS Hepatitis B virus.
XX
PN WO200219986-A1.
XX
PD 14-MAR-2002.
XX
PF 08-SEP-2000; 2000WO-US024802.
XX
PR 08-SEP-2000; 2000WO-US024802.
XX
PA (EPIM-) EPIMMUNE INC.
PA (SETT/) SETTE A.
PI Sette A, Sidney J, Southwood S, Vitiello MA, Livingstone BD;
PI Celis E, Kubo RT, Grey HM, Chesnut RW;
XX
DR WPI; 2002-643192/69.
XX
PT Vaccine composition for treating or preventing hepatitis B virus (HBV)
PT infection, and/or for stimulating an immune response to HBV, comprises a
PT HBV peptide epitope.
XX
PS Claim 29; Page 220; 228pp; English.
XX
SQ The present invention relates to a composition comprising at least one
CC hepatitis B virus epitope. This can be used in the production of a
CC vaccine for use in preventing or treating hepatitis B virus infection.
CC The present sequence is a peptide described in the exemplification of the
CC invention
XX
SQ Sequence 10 AA;
Query Match 100.0%; Score 54; DB 5; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0024;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 QAFTFSPYK 10
| | | | |
DB 1 QAFTFSPYK 10
RESULT 5
ID ABJ10167 standard; peptide; 10 AA.
XX
AC ABJ10167;
XX

XX
DT 14-NOV-2002 (first entry)
XX
DE Hepatitis B virus epitope #4119.
XX
KW Hepatitis B virus; HBV; epitope; vaccine; HBV infection; hepatitis;
KW virucide; hepatotropic; antiinflammatory.
XX
OS Hepatitis B virus.
XX
PN WO200219986-A1.
XX
PD 14-MAR-2002.
XX
PF 08-SEP-2000; 2000WO-US024802.
XX
PR 08-SEP-2000; 2000WO-US024802.
XX
PA (EPIM-) EPIMMUNE INC.
PA (SETT/) SETTE A.
PI Sette A, Sidney J, Southwood S, Vitiello MA, Livingstone BD;
PI Celis E, Kubo RT, Grey HM, Chesnut RW;
XX
DR WPI; 2002-643192/69.
XX
PT Vaccine composition for treating or preventing hepatitis B virus (HBV)
PT infection, and/or for stimulating an immune response to HBV, comprises a
PT HBV peptide epitope.
XX
PS Claim 29; Page 220; 228pp; English.
XX
SQ The present invention relates to a composition comprising at least one
CC hepatitis B virus epitope. This can be used in the production of a
CC vaccine for use in preventing or treating hepatitis B virus infection.
CC The present sequence is a peptide described in the exemplification of the
CC invention
XX
SQ Sequence 10 AA;
Query Match 100.0%; Score 54; DB 5; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0024;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 QAFTFSPYK 10
| | | | |
DB 1 QAFTFSPYK 10
RESULT 6
ID ABJ09660 standard; peptide; 10 AA.
XX
AC ABJ09660;
XX
DT 14-NOV-2002 (first entry)
XX
DE Hepatitis B virus epitope #3612.
XX
KW Hepatitis B virus; HBV; epitope; vaccine; HBV infection; hepatitis;
KW virucide; hepatotropic; antiinflammatory.
XX
OS Hepatitis B virus.
XX
PN WO200219986-A1.
XX
PD 14-MAR-2002.
XX
PF 08-SEP-2000; 2000WO-US024802.
XX
PR 08-SEP-2000; 2000WO-US024802.
XX
PA (EPIM-) EPIMMUNE INC.
XX

PA (SETT/) SETTE A.
PI Sette A, Sidney J, Southwood S, Vitiello MA, Livingstone BD;
FI Celis E, Kubo RT, Grey HM, Chesnut RW;
XX WPI; 2002-643192/69.
XX Vaccine composition for treating or preventing hepatitis B virus (HBV)
PT infection, and/or for stimulating an immune response to HBV, comprises a
PT HBV peptide epitope.
XX Disclosure; Page 195; 228pp; English.
XX The present invention relates to a composition comprising at least one
CC hepatitis B virus epitope. This can be used in the production of a
CC vaccine for use in preventing or treating hepatitis B virus infection.
CC The present sequence is a peptide described in the exemplification of the
CC invention
XX
XX SQ Sequence 10 AA;
Query Match 100.0%; Score 54; DB 5; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0024;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 QAFTFSPYTK 10
DB 1 QAFTFSPYTK 10
RESULT 7
ABJ08176
ID ABJ08176 standard; peptide; 10 AA.
AC ABJ08176;
XX 14-NOV-2002 (first entry)
XX Hepatitis B virus epitope #2394.
XX Hepatitis B virus; HBV; epitope; vaccine; HBV infection; hepatitis;
KW virucide; hepatotropic; antiinflammatory.
XX Hepatitis B virus.
XX WO200219986-A1.
XX 14-MAR-2002.
XX 08-SEP-2000; 2000WO-US024802.
XX 08-SEP-2000; 2000WO-US024802.
XX (EPIM-) EPIMMUNE INC.
XX (SETT/) SETTE A.
XX Sette A, Sidney J, Southwood S, Vitiello MA, Livingstone BD;
FI Celis E, Kubo RT, Grey HM, Chesnut RW;
XX WPI; 2002-643192/69.
XX Vaccine composition for treating or preventing hepatitis B virus (HBV)
PT infection, and/or for stimulating an immune response to HBV, comprises a
PT HBV peptide epitope.
XX Disclosure; Page 161; 228pp; English.
XX The present invention relates to a composition comprising at least one
CC hepatitis B virus epitope. This can be used in the production of a
CC vaccine for use in preventing or treating hepatitis B virus infection.
CC The present sequence is a peptide described in the exemplification of the
CC invention
XX

SQ Sequence 10 AA;
Query Match 100.0%; Score 54; DB 5; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0024;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 QAFTFSPYTK 10
DB 1 QAFTFSPYTK 10
RESULT 8
ABJ09778
ID ABJ09778 standard; peptide; 10 AA.
XX ABJ09778;
XX 14-NOV-2002 (first entry)
XX Hepatitis B virus epitope #3730.
XX Hepatitis B virus; HBV; epitope; vaccine; HBV infection; hepatitis;
KW virucide; hepatotropic; antiinflammatory.
XX Hepatitis B virus.
XX WO200219986-A1.
XX 14-MAR-2002.
XX 08-SEP-2000; 2000WO-US024802.
XX 08-SEP-2000; 2000WO-US024802.
XX (EPIM-) EPIMMUNE INC.
XX (SETT/) SETTE A.
XX Sette A, Sidney J, Southwood S, Vitiello MA, Livingstone BD;
FI Celis E, Kubo RT, Grey HM, Chesnut RW;
XX WPI; 2002-643192/69.
XX Vaccine composition for treating or preventing hepatitis B virus (HBV)
PT infection, and/or for stimulating an immune response to HBV, comprises a
PT HBV peptide epitope.
XX Example 2; Page 200; 228pp; English.
XX The present invention relates to a composition comprising at least one
CC hepatitis B virus epitope. This can be used in the production of a
CC vaccine for use in preventing or treating hepatitis B virus infection.
CC The present sequence is a peptide described in the exemplification of the
CC invention
XX
XX SQ Sequence 10 AA;
Query Match 100.0%; Score 54; DB 5; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0024;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 QAFTFSPYTK 10
DB 1 QAFTFSPYTK 10
RESULT 9
ABJ08514
ID ABJ08514 standard; peptide; 10 AA.
XX ABJ08514;
XX 14-NOV-2002 (first entry)
XX

DE Hepatitis B virus epitope #2732.
XX
KW Hepatitis B virus; HBV; epitope; vaccine; HBV infection; hepatitis;
KW virucide; hepatotropic; antiinflammatory.
OS Hepatitis B virus.
XX
PN WO200219986-A1.
XX
XX 14-MAR-2002.
PD
PF 08-SEP-2000; 2000WO-US024802.
XX
XX 08-SEP-2000; 2000WO-US024802.
PR
XX (EPIM-) EPIMMUNE INC.
PA (SETT/) SETTE A.
XX
XX Sette A, Sidney J, Southwood S, Vitiello MA, Livingstone BD;
PI Cellis E, Kubo RT, Grey HW, Chesnut RW;
XX
XX WPI; 2002-643192/69.
DR
XX Vaccine composition for treating or preventing hepatitis B virus (HBV)
PT infection, and/or for stimulating an immune response to HBV, comprises a
PT HBV peptide epitope.
XX
XX Claim 1; Page 217; 228pp; English.
PS
XX The present invention relates to a composition comprising at least one
CC hepatitis B virus epitope. This can be used in the production of a
CC vaccine for use in preventing or treating hepatitis B virus infection.
CC The present sequence is a peptide described in the exemplification of the
CC invention
XX
XX Sequence 10 AA;
SQ
Query Match 100.0%; Score 54; DB 5; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0024;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 QAFTFSPYK 10
DB |||||
1 QAFTFSPYK 10
RESULT 11
ABJ10117
ID ABJ10117 standard; peptide; 10 AA.
XX
AC ABJ10117;
XX
DT 14-NOV-2002 (first entry)
XX
DE Hepatitis B virus epitope #4069.
XX
KW Hepatitis B virus; HBV; epitope; vaccine; HBV infection; hepatitis;
KW virucide; hepatotropic; antiinflammatory.
OS Hepatitis B virus.
XX
PN WO200219986-A1.
XX
XX 14-MAR-2002.
PD
PF 08-SEP-2000; 2000WO-US024802.
XX
PR 08-SEP-2000; 2000WO-US024802.
XX
PA (EPIM-) EPIMMUNE INC.
PA (SETT/) SETTE A.
XX
XX Sette A, Sidney J, Southwood S, Vitiello MA, Livingstone BD;
PI Cellis E, Kubo RT, Grey HW, Chesnut RW;
XX
XX WPI; 2002-643192/69.
DR
XX Vaccine composition for treating or preventing hepatitis B virus (HBV)
PT infection, and/or for stimulating an immune response to HBV, comprises a
PT HBV peptide epitope.
XX
XX Claim 15; Page 218; 228pp; English.
PS
XX The present invention relates to a composition comprising at least one
CC hepatitis B virus epitope. This can be used in the production of a
CC vaccine for use in preventing or treating hepatitis B virus infection.
CC The present sequence is a peptide described in the exemplification of the
CC invention
XX
XX Sequence 10 AA;
SQ
Query Match 100.0%; Score 54; DB 5; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0024;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 QAFTFSPYK 10
DB |||||
1 QAFTFSPYK 10
RESULT 10
ABJ10067
ID ABJ10067 standard; peptide; 10 AA.
XX
AC ABJ10067;
XX
DT 14-NOV-2002 (first entry)
XX
DE Hepatitis B virus epitope #4019.
XX
KW Hepatitis B virus; HBV; epitope; vaccine; HBV infection; hepatitis;
KW virucide; hepatotropic; antiinflammatory.
XX
OS Hepatitis B virus.
XX
PN WO200219986-A1.
XX
XX 14-MAR-2002.
PD
PF 08-SEP-2000; 2000WO-US024802.
XX
XX 08-SEP-2000; 2000WO-US024802.
PR
XX (EPIM-) EPIMMUNE INC.
PA (SETT/) SETTE A.
XX
XX Sette A, Sidney J, Southwood S, Vitiello MA, Livingstone BD;

Best Local Similarity 100.0%; Pred. No. 0.0024;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPYK 10
Db 1 QAFTFSPYK 10

RESULT 12
ABJ06455
ID ABJ06455 standard; peptide; 10 AA.
XX AC ABJ06455;
XX 14-NOV-2002 (first entry)
XX Hepatitis B virus epitope #673.
XX Hepatitis B virus; HBV; epitope; vaccine; HBV infection; hepatitis;
KW virucide; hepatotropic; antiinflammatory.
XX Hepatitis B virus.
OS WO200219986-A1.
XX PN
XX PD 14-MAR-2002.
XX PF 08-SEP-2000; 2000WO-US024802.
XX PR 08-SEP-2000; 2000WO-US024802.
XX PA (EPIM-) EPIMMUNE INC.
PA (SETT/) SETTE A.
XX PI Sette A, Sidney J, Southwood S, Vitiello MA, Livingston BD;
PI Celis E, Kubo RT, Grey HM, Chesnut RW;
XX WPI; 2002-643192/69.
XX Vaccine composition for treating or preventing hepatitis B virus (HBV)
PT infection, and/or for stimulating an immune response to HBV, comprises a
PT HBV peptide epitope.
XX Disclosure; Page 125; 228pp; English.
XX The present invention relates to a composition comprising at least one
CC hepatitis B virus epitope. This can be used in the production of a
CC vaccine for use in preventing or treating hepatitis B virus infection.
CC The present sequence is a peptide described in the exemplification of the
CC invention

Qy Sequence 10 AA;
Db

Query Match 100.0%; Score 54; DB 5; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0024;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPYK 10
Db 1 QAFTFSPYK 10

RESULT 13
ADA49616
ID ADA49616 standard; peptide; 10 AA.
XX AC ADA49616;
XX 20-NOV-2003 (first entry)
XX Multi-epitope construct specific epitope #158.
XX multi-epitope; immunogenic; epitope; major histocompatibility complex;

MHC class I; MHC class II; junctional epitope.
Hepatitis B virus.
US2002119127-A1.
29-AUG-2002.
27-JUN-2001; 2001US-00894018.
28-DEC-1999; 99US-0173390P.
28-DEC-2000; 2000WO-US035568.
16-APR-2001; 2001US-0284221P.
XX (SETT/) SETTE A.
PA (CHES/) CHESNUT R.
PA (LIVI/) LIVINGSTON B D.
PA (BAKE/) BAKER D M.
PA (NEWM/) NEWMAN M J.
PA (BROW/) BROWN D H.
XX Sette A, Chesnut R, Livingston BD, Baker DM, Newman MJ, Brown DH;
PI WPI; 2003-615704/58.
XX Designing multi-epitope construct having major histocompatibility complex
PT class I and II epitope nucleic acids, by selecting mixture of amino acid
PT insertions at junctions of construct to minimize functional epitopes.
XX Disclosure; Fig 19D; 78pp; English.
XX The invention relates to a method of designing multi-epitope constructs
CC comprising major histocompatibility complex (MHC) class I and II (CTL)
CC epitope nucleic acids (CEN), involves sorting CEN, introducing flanking
CC amino acid residue selected from specified amino acid residues given in
CC specification at C+1 position of CEN, introducing amino acid spacer
CC residues between two CEN, and selecting the constructs having less
CC junctional epitopes. The method is useful for designing a multi-epitope
CC construct having multiple epitope nucleic acid. The method avoids or
CC minimises the occurrence of junctional epitopes and maximises the
CC immunogenicity and/or antigenicity of multi-epitope vaccines. The present
CC sequence represents the amino acid sequence of an epitope present in a
CC multi-epitope construct.
XX Sequence 10 AA;
SQ

Query Match 100.0%; Score 54; DB 7; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0024;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPYK 10
Db 1 QAFTFSPYK 10

RESULT 14
ADK39666
ID ADK39666 standard; peptide; 10 AA.
XX AC ADK39666;
XX 06-MAY-2004 (first entry)
XX Hepatitis B virus (HBV) epitope #2534.
XX HBV; cytotoxic T-cell response; immunogenic activity;
KW human leukocyte antigen; HLA; HBV infection; HBV epitope;
KW antiinflammatory; hepatotropic; virucide.
XX Hepatitis B virus.
OS US6689363-B1.
XX PN
XX

```
PD 10-FEB-2004.
XX
PF 27-JAN-1999; 99US-00239043.
XX
XX 29-JAN-1992; 92US-00827682.
PR 27-APR-1992; 92US-00874491.
PR 07-AUG-1992; 92US-00926666.
PR 26-AUG-1992; 92US-00935811.
PR 05-MAR-1993; 93US-00027146.
PR 04-JUN-1993; 93US-00073205.
PR 06-AUG-1993; 93US-00103396.
PR 16-FEB-1994; 94US-00197484.
PR 23-NOV-1994; 94US-00205713.
PR 01-DEC-1994; 94US-00347610.
PR 13-MAR-1996; 96US-0013363P.
PR 12-MAR-1997; 97US-00820360.
PR 25-NOV-1997; 97US-00978291.
PR 10-NOV-1998; 98US-00189702.
XX
PA (EPIM-) EPIMMUNE INC.
XX
PI Sette A, Sidney J, Southwood S, Vitiello MA, Livingston BD;
PI Celis E, Kubo RT, Grey HM, Chesnut RW;
XX
DR WPI; 2004-141419/14.
XX
PT Hepatitis B virus (HBV) vaccine composition useful for inducing cellular
PT immune responses to HBV or for preventing and treating HBV infection.
XX
PS Disclosure; SEQ ID NO 2534; 73pp; English.
XX
CC The invention relates to a hepatitis B virus (HBV) vaccine composition
CC comprising a pharmaceutical carrier and an isolated peptide less than 25
CC or less than 15 amino acids in length. The invention also relates to a
CC method of inducing a cytotoxic T-cell response to HBV in a mammal and a
CC method of monitoring immunogenic activity of the vaccine in a patient
CC having a known human leukocyte antigen (HLA) type. The composition and
CC methods are useful for preventing and treating HBV infection. This
CC sequence represents an HBV epitope used in the scope of the invention.
CC Note: The sequence data for this patent did not form part of the printed
CC specification but was obtained in electronic format directly from USPTO
CC at seqdata.uspto.gov/sequence.html.
XX
SQ Sequence 10 AA;
Query Match 100.0%; Score 54; DB 8; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0024;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 QAFTFSPTYK 10
Db 1 QAFTFSPTYK 10
RESULT 15
ADK37735
ID ADK37735 standard; peptide; 10 AA.
XX
AC ADK37735;
XX
DT 06-MAY-2004 (first entry)
XX
DE Hepatitis B virus (HBV) epitope #603.
XX
KW HBV; cytotoxic T-cell response; immunogenic activity;
KW human leukocyte antigen; HLA; HBV infection; HBV epitope;
KW antiinflammatory; hepatotropic; virucide.
XX
OS Hepatitis B virus.
XX
PN US6689363-B1.
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XX
PD 10-FEB-2004.
XX
PF 27-JAN-1999; 99US-00239043.
XX
XX 29-JAN-1992; 92US-00827682.
PR 27-APR-1992; 92US-00874491.
PR 07-AUG-1992; 92US-00926666.
PR 26-AUG-1992; 92US-00935811.
PR 05-MAR-1993; 93US-00027146.
PR 04-JUN-1993; 93US-00073205.
PR 06-AUG-1993; 93US-00103396.
PR 16-FEB-1994; 94US-00197484.
PR 23-NOV-1994; 94US-00205713.
PR 01-DEC-1994; 94US-00347610.
PR 13-MAR-1996; 96US-0013363P.
PR 12-MAR-1997; 97US-00820360.
PR 25-NOV-1997; 97US-00978291.
PR 10-NOV-1998; 98US-00189702.
XX
PA (EPIM-) EPIMMUNE INC.
XX
PI Sette A, Sidney J, Southwood S, Vitiello MA, Livingston BD;
PI Celis E, Kubo RT, Grey HM, Chesnut RW;
XX
DR WPI; 2004-141419/14.
XX
PT Hepatitis B virus (HBV) vaccine composition useful for inducing cellular
PT immune responses to HBV or for preventing and treating HBV infection.
XX
PS Disclosure; SEQ ID NO 603; 73pp; English.
XX
CC The invention relates to a hepatitis B virus (HBV) vaccine composition
CC comprising a pharmaceutical carrier and an isolated peptide less than 25
CC or less than 15 amino acids in length. The invention also relates to a
CC method of inducing a cytotoxic T-cell response to HBV in a mammal and a
CC method of monitoring immunogenic activity of the vaccine in a patient
CC having a known human leukocyte antigen (HLA) type. The composition and
CC methods are useful for preventing and treating HBV infection. This
CC sequence represents an HBV epitope used in the scope of the invention.
CC Note: The sequence data for this patent did not form part of the printed
CC specification but was obtained in electronic format directly from USPTO
CC at seqdata.uspto.gov/sequence.html.
XX
SQ Sequence 10 AA;
Query Match 100.0%; Score 54; DB 8; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0024;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 QAFTFSPTYK 10
Db 1 QAFTFSPTYK 10
Search completed: June 28, 2005, 09:10:37
Job time : 162 secs
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OM protein - protein search, using sw model

Run on: June 28, 2005, 08:51:07 ; Search time 167 Seconds
(without alignments)
30.663 Million cell updates/sec

Title: US-09-350-401b-638
Perfect score: 54
Sequence: 1 QAFTFSPYK 10

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1612378 seqs, 512079187 residues

Total number of hits satisfying chosen parameters: 1612378

Minimum DB seq length: 0
Maximum DB seq length: 2000000000
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : UniProt_03.*
1: uniprot_sprot.*
2: uniprot_trembl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	54	100.0	83	2 Q9DKP9	Q9dkp9 hepatitis b
2	54	100.0	136	2 Q991M2	Q991m2 hepatitis b
3	54	100.0	342	2 Q991K7	Q991k7 hepatitis b
4	54	100.0	342	2 Q991K9	Q991k9 hepatitis b
5	54	100.0	345	2 Q991L1	Q991l1 hepatitis b
6	54	100.0	345	2 Q991L2	Q991l2 hepatitis b
7	54	100.0	345	2 Q9DKP1	Q9dkp1 hepatitis b
8	54	100.0	345	2 Q9DKP2	Q9dkp2 hepatitis b
9	54	100.0	345	2 Q9DKP4	Q9dkp4 hepatitis b
10	54	100.0	345	2 Q9DKP8	Q9dkp8 hepatitis b
11	54	100.0	345	2 Q9DKQ1	Q9dkq1 hepatitis b
12	54	100.0	345	2 Q9DKQ3	Q9dkq3 hepatitis b
13	54	100.0	540	2 Q97975	Q97975 hepatitis b
14	54	100.0	540	2 Q97976	Q97976 hepatitis b
15	54	100.0	540	2 Q69026	Q69026 hepatitis b
16	54	100.0	585	2 Q9IF49	Q9if49 hepatitis b
17	54	100.0	693	2 Q8B4F0	Q8b4f0 hepatitis b
18	54	100.0	698	2 Q67889	Q67889 hepatitis b
19	54	100.0	730	1 DPOL_HPBVA	P12933 hepatitis b
20	54	100.0	730	2 Q9YKJ8	Q9ykj8 hepatitis b
21	54	100.0	743	2 Q09517	Q09517 hepatitis b
22	54	100.0	750	1 DPOL_HPBVZ	P03155 hepatitis b
23	54	100.0	763	1 DPOL_HPBVP	Q02314 hepatitis b
24	54	100.0	763	2 Q91EH3	Q91eh3 hepatitis b
25	54	100.0	764	2 Q8B4E6	Q8b4e6 hepatitis b
26	54	100.0	765	2 Q8B4E2	Q8b4e2 hepatitis b
27	54	100.0	769	2 Q80GX5	Q80gx5 hepatitis b
28	54	100.0	780	2 Q9WP51	Q9wp51 hepatitis b
29	54	100.0	780	2 Q9WP81	Q9wp81 hepatitis b
30	54	100.0	787	2 Q09511	Q09511 hepatitis b
31	54	100.0	794	2 Q8B4F6	Q8b4f6 hepatitis b

32 54 100.0 795 2 Q8VLH4 hepatitis b
33 54 100.0 795 2 Q8B4F8 hepatitis b
34 54 100.0 797 2 Q8QZP4 hepatitis b
35 54 100.0 798 2 Q8B4G2 hepatitis b
36 54 100.0 801 2 Q09504 hepatitis b
37 54 100.0 801 2 Q09505 hepatitis b
38 54 100.0 801 2 Q9WP64 hepatitis b
39 54 100.0 805 2 Q7THR7 hepatitis b
40 54 100.0 805 2 Q8QJ74 hepatitis b
41 54 100.0 806 2 Q91522 hepatitis b
42 54 100.0 811 2 Q91582 hepatitis b
43 54 100.0 813 2 Q91IN8 hepatitis b
44 54 100.0 813 2 Q8B4C0 hepatitis b
45 54 100.0 813 2 Q8B4C2 hepatitis b

ALIGNMENTS

RESULT 1

Q9DKP9 PRELIMINARY; PRT; 83 AA.
AC Q9DKP9;
DT 01-MAR-2001 (TrEMBLrel. 16, Created)
DT 01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DE Mutant polymerase (Fragment).
OS Hepatitis B virus.
OC Viruses; Retrovird viruses; Hepadnaviridae; Orthohepadnavirus.
OX NCBI_TaxID=10407;
RN [1]
RP SEQUENCE FROM N.A.
RA Dong J., Cheng J., Huangfu J.K., Hong Y., Wang G., Chen C.G., Li L.,
RA Zhang L.X., Chen J.M.;
RT "The preliminary study on individually characterized quasiespecies of
RT hepatitis B virus."
RL Jie Fang Jun Yi Xue Za Zhi 27:119-121(2002).
DR EMBL; AF329860; AAG48741.1; -
DR GO; GO:0004523; F:ribonuclease H activity; IEA.
DR InterPro; IPR001462; DNaPol_viral_C.
DR Pfam; PF00336; DNaPol_viral_C; 1.
DR PRODOM; PDOM00814; DNaPol_viral_C; 1.
FT NON TER 1 83
SQ SEQUENCE 83 AA; 9409 MW; 48C125F9A0657A13 CRC64;

Query Match 100.0%; Score 54; DB 2; Length 83;
Best Local Similarity 100.0%; Pred.No. 0.004;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Oy 1 QAFTFSPYK 10
Db 70 QAFTFSPYK 79

RESULT 2

Q991M2 PRELIMINARY; PRT; 136 AA.
AC Q991M2;
DT 01-JUN-2001 (TrEMBLrel. 17, Created)
DT 01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
DE Pol protein (Fragment).
OS Hepatitis B virus.
OC Viruses; Retrovird viruses; Hepadnaviridae; Orthohepadnavirus.
OX NCBI_TaxID=10407;
RN [1]
RP SEQUENCE FROM N.A.
RA Murphy M.A., Imamichi T.;
RL Submitted (JAN-2001) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF333814; AAK21897.1; -
DR GO; GO:0004523; F:ribonuclease H activity; IEA.
DR InterPro; IPR001462; DNaPol_viral_C.

RN SEQUENCE FROM N.A.
 RC STRAIN=B11;
 RA Dong J., Cheng J., Wang Q.H., Shi S.S., Hong Y., Huangfu J.K.,
 RA Wang G., Li L., Si C.W.;
 RA "The study on quasispecies of hepatitis B virus: reverse transcriptase
 RT region in polymerase gene as an example.";
 RL Ping Tu Hsueh Pao 17:270-272(2001).
 RN SEQUENCE FROM N.A.
 RC STRAIN=B11;
 RA Dong J., Cheng J., Huangfu J.K., Hong Y., Wang G., Chen C.G., Li L.,
 RA Zhang L.X., Chen J.M.;
 RA "The preliminary study on individually characterized quasispecies of
 RT hepatitis B virus.";
 RL Jie Fang Jun Yi Xue Za Zhi 27:119-121(2002).
 RN SEQUENCE FROM N.A.
 RC STRAIN=B11;
 RA Dong J., Cheng J., Wang Q.H., Shi S.S., Hong Y., Huangfu J.K.,
 RA Wang G., Li L., Si C.W.;
 RA "The study on quasispecies of hepatitis B virus: reverse transcriptase
 RT region in polymerase gene as an example.";
 RL Jie Fang Jun Yi Xue Za Zhi 26:823-825(2002).
 DR EMBL; AF335734; AAK19538.1; -.
 DR GO; GO:0004523; F:ribonuclease H activity; IEA.
 DR GO; GO:0003723; F:RNA binding; IEA.
 DR GO; GO:0003964; F:RNA-directed DNA polymerase activity; IEA.
 DR GO; GO:0016740; F:transferase activity; IEA.
 DR GO; GO:0006278; P:RNA-dependent DNA replication; IEA.
 DR InterPro; IPR001462; DNAPol_viral_C.
 DR Pfam; PF00336; DNA_pol_viral_C; 1.
 DR Pfam; PF00078; RVT_1; 2.
 DR ProDom; PD000814; DNAPol_viral_C; 1.
 KW RNA-directed DNA polymerase; Transferase.
 FT NON_TER 1
 FT NON_TER 345
 SQ SEQUENCE 345 AA; 38768 MW; 73E36A866307A14B CRC64;

 Query Match 100.0%; Score 54; DB 2; Length 345;
 Best Local Similarity 100.0%; Pred. No. 0.019;
 Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

 QY 1 QAFSPPTYK 10
 |||||
 Db 332 QAFSPPTYK 341

 RESULT 6
 Q991L2 PRELIMINARY; PRT; 345 AA.
 AC Q991L2;
 DT 01-JUN-2001 (TRENBLrel. 17, Created)
 DT 01-JUN-2001 (TRENBLrel. 17, Last sequence update)
 DT 01-OCT-2003 (TRENBLrel. 25, Last annotation update)
 DE Polymerase (Fragment).
 OS Hepatitis B virus.
 OC Viruses; Retroid viruses; Hepadnaviridae; Orthohepadnavirus.
 OX NCBI_TaxID=10407;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Dong J., Cheng J., Wang Q.H., Shi S.S., Hong Y., Huangfu J.K.,
 RA Wang G., Li L., Si C.W.;
 RA "The study on quasispecies of hepatitis B virus: reverse transcriptase
 RT region in polymerase gene as an example.";
 RL Ping Tu Hsueh Pao 17:270-272(2001).
 RN SEQUENCE FROM N.A.
 RC STRAIN=B7;
 RA Dong J., Cheng J., Wang Q.H., Shi S.S., Hong Y., Huangfu J.K.,
 RA Wang G., Li L., Si C.W.;
 RA "The study on quasispecies of hepatitis B virus: reverse transcriptase
 RT region in polymerase gene as an example.";
 RL Ping Tu Hsueh Pao 17:270-272(2001).
 DR EMBL; AF335734; AAK19538.1; -.
 DR GO; GO:0004523; F:ribonuclease H activity; IEA.
 DR GO; GO:0003723; F:RNA binding; IEA.
 DR GO; GO:0003964; F:RNA-directed DNA polymerase activity; IEA.
 DR GO; GO:0016740; F:transferase activity; IEA.
 DR GO; GO:0006278; P:RNA-dependent DNA replication; IEA.
 DR InterPro; IPR001462; DNAPol_viral_C.
 DR Pfam; PF00336; DNA_pol_viral_C; 1.
 DR Pfam; PF00078; RVT_1; 2.
 DR ProDom; PD000814; DNAPol_viral_C; 1.
 KW RNA-directed DNA polymerase; Transferase.
 FT NON_TER 1
 FT NON_TER 345
 SQ SEQUENCE 345 AA; 38768 MW; 73E36A866307A14B CRC64;

RT "The preliminary study on individually characterized quasispecies of
 hepatitis B virus.";
 RL Jie Fang Jun Yi Xue Za Zhi 27:119-121(2002).
 RN SEQUENCE FROM N.A.
 RC STRAIN=B7;
 RA Dong J., Cheng J., Wang Q.H., Shi S.S., Hong Y., Huangfu J.K.,
 RA Wang G., Li L., Si C.W.;
 RA "The study on quasispecies of hepatitis B virus: reverse transcriptase
 RT region in polymerase gene as an example.";
 RL Jie Fang Jun Yi Xue Za Zhi 26:823-825(2002).
 DR EMBL; AF335733; AAK19536.1; -.
 DR GO; GO:0004523; F:ribonuclease H activity; IEA.
 DR GO; GO:0003723; F:RNA binding; IEA.
 DR GO; GO:0003964; F:RNA-directed DNA polymerase activity; IEA.
 DR GO; GO:0016740; F:transferase activity; IEA.
 DR GO; GO:0006278; P:RNA-dependent DNA replication; IEA.
 DR InterPro; IPR001462; DNAPol_viral_C.
 DR InterPro; IPR000477; RVTse.
 DR Pfam; PF00336; DNA_pol_viral_C; 1.
 DR Pfam; PF00078; RVT_1; 2.
 DR ProDom; PD000814; DNAPol_viral_C; 1.
 KW RNA-directed DNA polymerase; Transferase.
 FT NON_TER 1
 FT NON_TER 345
 SQ SEQUENCE 345 AA; 38757 MW; D7D7053109DSA239 CRC64;

 Query Match 100.0%; Score 54; DB 2; Length 345;
 Best Local Similarity 100.0%; Pred. No. 0.019;
 Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

 QY 1 QAFSPPTYK 10
 |||||
 Db 332 QAFSPPTYK 341

 RESULT 7
 Q9DKP1 PRELIMINARY; PRT; 345 AA.
 AC Q9DKP1;
 DT 01-MAR-2001 (TRENBLrel. 16, Created)
 DT 01-MAR-2001 (TRENBLrel. 16, Last sequence update)
 DT 01-OCT-2003 (TRENBLrel. 25, Last annotation update)
 DE Polymerase (Fragment).
 OS Hepatitis B virus.
 OC Viruses; Retroid viruses; Hepadnaviridae; Orthohepadnavirus.
 OX NCBI_TaxID=10407;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Dong J., Cheng J., Wang Q.H., Shi S.S., Hong Y., Huangfu J.K.,
 RA Wang G., Li L., Si C.W.;
 RA "The study on quasispecies of hepatitis B virus: reverse transcriptase
 RT region in polymerase gene as an example.";
 RL Ping Tu Hsueh Pao 17:270-272(2001).
 RN SEQUENCE FROM N.A.
 RA Dong J., Cheng J., Huangfu J.K., Hong Y., Wang G., Chen C.G., Li L.,
 RA Zhang L.X., Chen J.M.;
 RA "The preliminary study on individually characterized quasispecies of
 RT hepatitis B virus.";
 RL Jie Fang Jun Yi Xue Za Zhi 27:119-121(2002).
 RN SEQUENCE FROM N.A.
 RA Dong J., Cheng J., Wang Q.H., Shi S.S., Hong Y., Huangfu J.K.,
 RA Wang G., Li L., Si C.W.;
 RA "The study on quasispecies of hepatitis B virus: reverse transcriptase
 RT region in polymerase gene as an example.";
 RL Jie Fang Jun Yi Xue Za Zhi 26:823-825(2002).
 DR EMBL; AF329865; AAG48751.1; -.
 DR GO; GO:0004523; F:ribonuclease H activity; IEA.
 DR GO; GO:0003723; F:RNA binding; IEA.
 DR GO; GO:0003964; F:RNA-directed DNA polymerase activity; IEA.
 DR GO; GO:0016740; F:transferase activity; IEA.


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RP SEQUENCE FROM N.A.
RA Dong J., Cheng J., Wang Q.H., Shi S.S., Hong Y., Huangfu J.K.,
RA Wang G., Li L., Si C.W.;
RT "The study on quasispecies of hepatitis b virus: reverse transcriptase
RL Jie Fang Jun Yi Xue Za Zhi 26:823-825(2002).
RT region in polymerase gene as an example.";
RL Ping Tu Hsueh Pao 17:270-272(2001).
RN [2]
RP SEQUENCE FROM N.A.
RA Dong J., Cheng J., Huangfu J.K., Hong Y., Wang G., Chen C.G., Li L.,
RA Zhang L.X., Chen J.M.;
RT "The preliminary study on individually characterized quasispecies of
RT hepatitis B virus.";
RL Jie Fang Jun Yi Xue Za Zhi 27:119-121(2002).
RN [3]
RP SEQUENCE FROM N.A.
RA Dong J., Cheng J., Wang Q.H., Shi S.S., Hong Y., Huangfu J.K.,
RA Wang G., Li L., Si C.W.;
RT "The study on quasispecies of hepatitis B virus: reverse transcriptase
RT region in polymerase gene as an example.";
RL Jie Fang Jun Yi Xue Za Zhi 26:823-825(2002).
DR EMBL; AF329861; AAG48743.1; -.
DR GO; GO:0004523; F:RNA binding; IEA.
DR GO; GO:0003723; F:RNA binding; IEA.
DR GO; GO:0003964; F:RNA-directed DNA polymerase activity; IEA.
DR GO; GO:0006278; F:RNA-dependent DNA replication; IEA.
DR InterPro; IPR001462; DNAPol_viral_C.
DR InterPro; IPR000477; RVTse.
DR Pfam; PF00078; RVT_1; 2.
DR ProDom; PD000814; DNAPol_viral_C; 1.
KW RNA-directed DNA polymerase; Transferase.
FT NON_TER 1
FT SEQUENCE 345 AA; 38728 MW; 6A49E103CA8536B8 CRC64;
SQ
Query Match 100.0%; Score 54; DB 2; Length 345;
Best Local Similarity 100.0%; Pred. No. 0.019;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTSPPTYK 10
Db |||||
RESULT 11
Q9DKQ1 PRELIMINARY; PRT; 345 AA.
AC Q9DKQ1;
DT 01-MAR-2001 (TRENBLrel. 16, Created)
DT 01-MAR-2001 (TRENBLrel. 16, Last sequence update)
DT 01-OCT-2003 (TRENBLrel. 25, Last annotation update)
DE Polymerase (Fragment).
OS Hepatitis B virus.
OC Viruses; Retroid viruses; Hepadnaviridae; Orthohepadnavirus.
OX NCBI_TaxID=10407;
RN [1]
RP SEQUENCE FROM N.A.
RA Dong J., Cheng J., Wang Q.H., Shi S.S., Hong Y., Huangfu J.K.,
RA Wang G., Li L., Si C.W.;
RT "The study on quasispecies of hepatitis b virus: reverse transcriptase
RT region in polymerase gene as an example.";
RL Ping Tu Hsueh Pao 17:270-272(2001).
RN [2]
RP SEQUENCE FROM N.A.
RA Dong J., Cheng J., Huangfu J.K., Hong Y., Wang G., Chen C.G., Li L.,
RA Zhang L.X., Chen J.M.;
RT "The preliminary study on individually characterized quasispecies of
RT hepatitis B virus.";
RL Jie Fang Jun Yi Xue Za Zhi 27:119-121(2002).
RN [3]
RP SEQUENCE FROM N.A.
RA Dong J., Cheng J., Huangfu J.K., Hong Y., Wang G., Chen C.G., Li L.,
RA Zhang L.X., Chen J.M.;
RT "The preliminary study on individually characterized quasispecies of
RT hepatitis B virus.";
RL Jie Fang Jun Yi Xue Za Zhi 27:119-121(2002).
RN [3]
RP SEQUENCE FROM N.A.
RA Dong J., Cheng J., Wang Q.H., Shi S.S., Hong Y., Huangfu J.K.,
RA Wang G., Li L., Si C.W.;
RT "The study on quasispecies of hepatitis B virus: reverse transcriptase
RT region in polymerase gene as an example.";
RL Jie Fang Jun Yi Xue Za Zhi 26:823-825(2002).
DR EMBL; AF329858; AAG48737.1; -.
DR GO; GO:0004523; F:RNA binding; IEA.
DR GO; GO:0003723; F:RNA binding; IEA.
DR GO; GO:0003964; F:RNA-directed DNA polymerase activity; IEA.
DR GO; GO:0006278; F:RNA-dependent DNA replication; IEA.
DR InterPro; IPR001462; DNAPol_viral_C.
DR InterPro; IPR000477; RVTse.
DR Pfam; PF00336; DNA_pol_viral_C; 1.
DR ProDom; PD000814; DNAPol_viral_C; 1.
KW RNA-directed DNA polymerase; Transferase.
FT NON_TER 1
FT SEQUENCE 345 AA; 38786 MW; 57EA66B9A0F7A46F CRC64;
SQ
Query Match 100.0%; Score 54; DB 2; Length 345;
Best Local Similarity 100.0%; Pred. No. 0.019;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTSPPTYK 10
Db |||||
RESULT 12
Q9DKQ3 PRELIMINARY; PRT; 345 AA.
AC Q9DKQ3;
DT 01-MAR-2001 (TRENBLrel. 16, Created)
DT 01-MAR-2001 (TRENBLrel. 16, Last sequence update)
DT 01-OCT-2003 (TRENBLrel. 25, Last annotation update)
DE Polymerase (Fragment).
OS Hepatitis B virus.
OC Viruses; Retroid viruses; Hepadnaviridae; Orthohepadnavirus.
OX NCBI_TaxID=10407;
RN [1]
RP SEQUENCE FROM N.A.
RA Dong J., Cheng J., Wang Q.H., Shi S.S., Hong Y., Huangfu J.K.,
RA Wang G., Li L., Si C.W.;
RT "The study on quasispecies of hepatitis b virus: reverse transcriptase
RT region in polymerase gene as an example.";
RL Ping Tu Hsueh Pao 17:270-272(2001).
RN [2]
RP SEQUENCE FROM N.A.
RA Dong J., Cheng J., Huangfu J.K., Hong Y., Wang G., Chen C.G., Li L.,
RA Zhang L.X., Chen J.M.;
RT "The preliminary study on individually characterized quasispecies of
RT hepatitis B virus.";
RL Jie Fang Jun Yi Xue Za Zhi 27:119-121(2002).
RN [3]
RP SEQUENCE FROM N.A.
RA Dong J., Cheng J., Wang Q.H., Shi S.S., Hong Y., Huangfu J.K.,
RA Wang G., Li L., Si C.W.;
RT "The study on quasispecies of hepatitis B virus: reverse transcriptase
RT region in polymerase gene as an example.";
RL Jie Fang Jun Yi Xue Za Zhi 26:823-825(2002).
DR EMBL; AF329858; AAG48737.1; -.
DR GO; GO:0004523; F:RNA binding; IEA.
DR GO; GO:0003723; F:RNA binding; IEA.
DR GO; GO:0003964; F:RNA-directed DNA polymerase activity; IEA.
DR GO; GO:0006278; F:RNA-dependent DNA replication; IEA.
DR InterPro; IPR001462; DNAPol_viral_C.
DR InterPro; IPR000477; RVTse.
DR Pfam; PF00336; DNA_pol_viral_C; 1.
DR ProDom; PD000814; DNAPol_viral_C; 1.
KW RNA-directed DNA polymerase; Transferase.

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RA Wang G., Li L., Si C.W.;
RT "The study on quasispecies of hepatitis B virus: reverse transcriptase
RT region in polymerase gene as an example.";
RL Jie Fang Jun Yi Xue Za Zhi 26:823-825(2002).
DR EMBL; AF329859; AAG48740.1; -.
DR GO; GO:0004523; F:RNA binding; IEA.
DR GO; GO:0003723; F:RNA binding; IEA.
DR GO; GO:0003964; F:RNA-directed DNA polymerase activity; IEA.
DR GO; GO:0006278; F:RNA-dependent DNA replication; IEA.
DR InterPro; IPR001462; DNAPol_viral_C.
DR InterPro; IPR000477; RVTse.
DR Pfam; PF00336; DNA_pol_viral_C; 1.
DR ProDom; PD000814; DNAPol_viral_C; 1.
KW RNA-directed DNA polymerase; Transferase.
FT NON_TER 1
FT SEQUENCE 345 AA; 38786 MW; 57EA66B9A0F7A46F CRC64;
SQ
Query Match 100.0%; Score 54; DB 2; Length 345;
Best Local Similarity 100.0%; Pred. No. 0.019;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTSPPTYK 10
Db |||||
RESULT 12
Q9DKQ3 PRELIMINARY; PRT; 345 AA.
AC Q9DKQ3;
DT 01-MAR-2001 (TRENBLrel. 16, Created)
DT 01-MAR-2001 (TRENBLrel. 16, Last sequence update)
DT 01-OCT-2003 (TRENBLrel. 25, Last annotation update)
DE Polymerase (Fragment).
OS Hepatitis B virus.
OC Viruses; Retroid viruses; Hepadnaviridae; Orthohepadnavirus.
OX NCBI_TaxID=10407;
RN [1]
RP SEQUENCE FROM N.A.
RA Dong J., Cheng J., Wang Q.H., Shi S.S., Hong Y., Huangfu J.K.,
RA Wang G., Li L., Si C.W.;
RT "The study on quasispecies of hepatitis b virus: reverse transcriptase
RT region in polymerase gene as an example.";
RL Ping Tu Hsueh Pao 17:270-272(2001).
RN [2]
RP SEQUENCE FROM N.A.
RA Dong J., Cheng J., Huangfu J.K., Hong Y., Wang G., Chen C.G., Li L.,
RA Zhang L.X., Chen J.M.;
RT "The preliminary study on individually characterized quasispecies of
RT hepatitis B virus.";
RL Jie Fang Jun Yi Xue Za Zhi 27:119-121(2002).
RN [3]
RP SEQUENCE FROM N.A.
RA Dong J., Cheng J., Wang Q.H., Shi S.S., Hong Y., Huangfu J.K.,
RA Wang G., Li L., Si C.W.;
RT "The study on quasispecies of hepatitis B virus: reverse transcriptase
RT region in polymerase gene as an example.";
RL Jie Fang Jun Yi Xue Za Zhi 26:823-825(2002).
DR EMBL; AF329858; AAG48737.1; -.
DR GO; GO:0004523; F:RNA binding; IEA.
DR GO; GO:0003723; F:RNA binding; IEA.
DR GO; GO:0003964; F:RNA-directed DNA polymerase activity; IEA.
DR GO; GO:0006278; F:RNA-dependent DNA replication; IEA.
DR InterPro; IPR001462; DNAPol_viral_C.
DR InterPro; IPR000477; RVTse.
DR Pfam; PF00336; DNA_pol_viral_C; 1.
DR ProDom; PD000814; DNAPol_viral_C; 1.
KW RNA-directed DNA polymerase; Transferase.

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FT NON TER 1 1
FT NON TER 345 345
SQ SEQUENCE 345 AA; 38719 MW; 940F2AEFC80A01EF CRC64;

Query Match 100.0%; Score 54; DB 2; Length 345;
Best Local Similarity 100.0%; Pred. No. 0.019;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPTYK 10
Db 332 QAFTFSPTYK 341

RESULT 13
ID Q97975 PRELIMINARY; PRT; 540 AA.
AC Q97975;
DT 01-FEB-1997 (TrEMBLrel. 02, Created)
DT 01-FEB-1997 (TrEMBLrel. 02, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE ORF (Fragment).
OS Hepatitis B virus.
OC Viruses; Retroid viruses; Hepadnaviridae; Orthohepadnavirus.
CX NCBI_TaxID=10407;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=95294549; PubMed=7775946;
RA Uchida T., Gotoh K., Shikata T.;
RT "Complete nucleotide sequences and the characteristics of two
RT hepatitis B virus mutants causing serologically negative acute or
RT chronic hepatitis B.";
RL J. Med. Virol. 45:247-252(1995).
DR EMBL; D16666; BAA04073.1; -
DR GO; GO:0003677; F:DNA binding; IEA.
DR GO; GO:0003887; F:DNA-directed DNA polymerase activity; IEA.
DR GO; GO:0004523; F:Ribonuclease H activity; IEA.
DR GO; GO:0003723; F:RNA binding; IEA.
DR GO; GO:0003964; F:RNA-directed DNA polymerase activity; IEA.
DR GO; GO:0016740; F:RNA-dependent DNA replication; IEA.
DR InterPro; IPR000201; DNAPol_viral_N.
DR InterPro; IPR000477; RVTse.
DR Pfam; PF00336; DNA_pol_viral_C; 1.
DR Pfam; PF00242; DNA_pol_viral_N; 1.
DR Pfam; PF00078; RVT_1; 2.
DR ProDom; PD000814; DNAPol_viral_C; 1.
DR ProDom; PD000814; DNAPol_viral_C; 1.
KW RNA-directed DNA polymerase; Transferase.
FT NON TER 1
SQ SEQUENCE 540 AA; 60345 MW; 7BBE285359DD39C5 CRC64;

Query Match 100.0%; Score 54; DB 2; Length 540;
Best Local Similarity 100.0%; Pred. No. 0.032;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPTYK 10
Db 362 QAFTFSPTYK 371

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ID Q97976 PRELIMINARY; PRT; 540 AA.
AC Q97976;
DT 01-FEB-1997 (TrEMBLrel. 02, Created)
DT 01-FEB-1997 (TrEMBLrel. 02, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE ORF (Fragment).
OS Hepatitis B virus.
OC Viruses; Retroid viruses; Hepadnaviridae; Orthohepadnavirus.
CX NCBI_TaxID=10407;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=95294549; PubMed=7775946;
RA Uchida T., Gotoh K., Shikata T.;
RT "Complete nucleotide sequences and the characteristics of two
RT hepatitis B virus mutants causing serologically negative acute or
RT chronic hepatitis B.";
RL J. Med. Virol. 45:247-252(1995).
DR EMBL; D16666; BAA04073.1; -
DR GO; GO:0003677; F:DNA binding; IEA.
DR GO; GO:0003887; F:DNA-directed DNA polymerase activity; IEA.
DR GO; GO:0004523; F:Ribonuclease H activity; IEA.
DR GO; GO:0003723; F:RNA binding; IEA.
DR GO; GO:0003964; F:RNA-directed DNA polymerase activity; IEA.
DR GO; GO:0016740; F:RNA-dependent DNA replication; IEA.
DR InterPro; IPR000201; DNAPol_viral_C.
DR InterPro; IPR000477; RVTse.
DR Pfam; PF00336; DNA_pol_viral_C; 1.
DR Pfam; PF00242; DNA_pol_viral_N; 1.
DR Pfam; PF00078; RVT_1; 2.
DR ProDom; PD000814; DNAPol_viral_C; 1.
DR ProDom; PD000814; DNAPol_viral_C; 1.
KW RNA-directed DNA polymerase; Transferase.
FT NON TER 1
SQ SEQUENCE 540 AA; 60345 MW; 7BBE285359DD39C5 CRC64;

Query Match 100.0%; Score 54; DB 2; Length 540;
Best Local Similarity 100.0%; Pred. No. 0.032;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPTYK 10
Db 362 QAFTFSPTYK 371

RESULT 14
ID Q97976 PRELIMINARY; PRT; 540 AA.
AC Q97976;
DT 01-FEB-1997 (TrEMBLrel. 02, Created)
DT 01-FEB-1997 (TrEMBLrel. 02, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE ORF (Fragment).
OS Hepatitis B virus.
OC Viruses; Retroid viruses; Hepadnaviridae; Orthohepadnavirus.
CX NCBI_TaxID=10407;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=95294549; PubMed=7775946;
RA Uchida T., Gotoh K., Shikata T.;
RT "Complete nucleotide sequences and the characteristics of two
RT hepatitis B virus mutants causing serologically negative acute or
RT chronic hepatitis B.";
RL J. Med. Virol. 45:247-252(1995).
DR EMBL; D16666; BAA04073.1; -
DR GO; GO:0003677; F:DNA binding; IEA.
DR GO; GO:0003887; F:DNA-directed DNA polymerase activity; IEA.
DR GO; GO:0004523; F:Ribonuclease H activity; IEA.
DR GO; GO:0003723; F:RNA binding; IEA.
DR GO; GO:0003964; F:RNA-directed DNA polymerase activity; IEA.
DR GO; GO:0016740; F:RNA-dependent DNA replication; IEA.
DR InterPro; IPR000201; DNAPol_viral_C.
DR InterPro; IPR000477; RVTse.
DR Pfam; PF00336; DNA_pol_viral_C; 1.
DR Pfam; PF00242; DNA_pol_viral_N; 1.
DR Pfam; PF00078; RVT_1; 2.
DR ProDom; PD000814; DNAPol_viral_C; 1.
DR ProDom; PD000814; DNAPol_viral_C; 1.
KW RNA-directed DNA polymerase; Transferase.
FT NON TER 1
SQ SEQUENCE 540 AA; 60345 MW; 7BBE285359DD39C5 CRC64;

Query Match 100.0%; Score 54; DB 2; Length 540;
Best Local Similarity 100.0%; Pred. No. 0.032;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPTYK 10
Db 362 QAFTFSPTYK 371

RESULT 15
ID Q69026 PRELIMINARY; PRT; 540 AA.
AC Q69026;
DT 01-NOV-1996 (TrEMBLrel. 01, Created)
DT 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE P gene product.
OS Hepatitis B virus.
OC Viruses; Retroid viruses; Hepadnaviridae; Orthohepadnavirus.
CX NCBI_TaxID=10407;
RN [1]
RP SEQUENCE FROM N.A.
RX STRAIN=AVI;
RX MEDLINE=87059755; PubMed=3783127;
RA Okamoto H., Imai M., Shinozaki M., Hoshi Y., Iizuka H., Gotanda T.,
RA Tsuda F., Miyakawa Y., Mayumi M.;
RT "Nucleotide Sequence of a Cloned Hepatitis B Virus Genome, Subtype
RT ay:Comparison with Genomes of the Other Three Subtypes.";
RL J. Gen. Virol. 67:2305-2314(1986).
DR EMBL; X04615; CAA28286.1; -
DR GO; GO:0003677; F:DNA binding; IEA.
DR GO; GO:0003887; F:DNA-directed DNA polymerase activity; IEA.
DR GO; GO:0004523; F:Ribonuclease H activity; IEA.
DR GO; GO:0003723; F:RNA binding; IEA.
DR GO; GO:0003964; F:RNA-directed DNA polymerase activity; IEA.
DR GO; GO:0016740; F:RNA-dependent DNA replication; IEA.
DR InterPro; IPR000201; DNAPol_viral_N.
DR InterPro; IPR000477; RVTse.
DR Pfam; PF00336; DNA_pol_viral_C; 1.
DR Pfam; PF00242; DNA_pol_viral_N; 1.
DR Pfam; PF00078; RVT_1; 2.
DR ProDom; PD000814; DNAPol_viral_C; 1.
DR ProDom; PD000814; DNAPol_viral_C; 1.
KW RNA-directed DNA polymerase; Transferase.
SQ SEQUENCE 540 AA; 60364 MW; 80446CA7C80F998A CRC64;

Query Match 100.0%; Score 54; DB 2; Length 540;
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Best Local Similarity 100.0%; Pred. No. 0.032;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFSPYK 10
| | | | |
Db 362 QAFSPYK 371

Search completed: June 28, 2005, 09:13:30
Job time : 168 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: June 28, 2005, 09:04:13 ; Search time 42 Seconds
(without alignments)
17.774 Million cell updates/sec

Title: US-09-350-401B-638

Perfect score: 54

Sequence: 1 QAFTFSPYK 10

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 513545 seqs, 74649064 residues

Total number of hits satisfying chosen parameters: 513545

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

- Issued Patents_AA.*
1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep.*
2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep.*
3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep.*
4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep.*
5: /cgn2_6/ptodata/1/iaa/PTUS_COMB.pep.*
6: /cgn2_6/ptodata/1/iaa/backfiles1.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	54	100.0	10	3	US-08-159-339A-374
2	54	100.0	10	4	US-09-311-784A-159
3	54	100.0	10	4	US-09-239-043D-603
4	54	100.0	10	4	US-09-239-043D-1917
5	54	100.0	10	4	US-09-239-043D-2534
6	54	100.0	11	4	US-09-239-043D-433
7	54	100.0	15	4	US-09-009-953-266
8	54	100.0	15	4	US-09-311-784A-137
9	54	100.0	15	4	US-09-239-043D-2122
10	54	100.0	15	4	US-09-239-043D-2556
11	54	100.0	730	4	US-08-591-502B-49
12	54	100.0	832	4	US-08-591-502B-60
13	54	100.0	832	4	US-08-591-502B-61
14	54	100.0	832	4	US-08-591-502B-62
15	54	100.0	832	4	US-08-591-502B-63
16	54	100.0	832	4	US-08-591-502B-64
17	54	100.0	842	4	US-08-591-502B-50
18	54	100.0	842	4	US-08-591-502B-51
19	54	100.0	843	4	US-09-719-528A-2
20	54	100.0	843	4	US-08-591-502B-45
21	54	100.0	843	4	US-08-591-502B-47
22	54	100.0	843	4	US-08-591-502B-48
23	54	100.0	843	4	US-08-591-502B-53
24	54	100.0	843	4	US-08-591-502B-54
25	54	100.0	843	4	US-08-591-502B-55
26	54	100.0	843	4	US-08-591-502B-56
27	54	100.0	843	4	US-08-591-502B-59

28	54	100.0	843	4	US-10-209-264-2	Sequence 2, Appli
29	54	100.0	845	1	US-08-416-950-11	Sequence 11, Appl
30	54	100.0	845	2	US-08-469-830-11	Sequence 11, Appl
31	54	100.0	845	4	US-08-591-502B-11	Sequence 11, Appl
32	54	100.0	845	4	US-08-591-502B-46	Sequence 46, Appl
33	54	100.0	845	4	US-08-591-502B-57	Sequence 57, Appl
34	54	100.0	845	4	US-08-591-502B-58	Sequence 58, Appl
35	54	100.0	845	6	5196194-17	Patent No. 5196194
36	54	100.0	845	6	5196194-17	Patent No. 5196194
37	50	92.6	10	4	US-09-239-043D-2424	Sequence 2424, Ap
38	49	90.7	9	4	US-09-239-043D-1452	Sequence 1452, Ap
39	49	90.7	9	4	US-09-239-043D-1769	Sequence 1769, Ap
40	49	90.7	9	4	US-09-239-043D-1916	Sequence 1916, Ap
41	49	90.7	10	4	US-09-239-043D-1594	Sequence 1594, Ap
42	49	90.7	10	4	US-09-239-043D-1754	Sequence 1754, Ap
43	49	90.7	10	4	US-09-239-043D-1770	Sequence 1770, Ap
44	49	90.7	10	4	US-09-239-043D-2423	Sequence 2423, Ap
45	49	90.7	11	4	US-09-239-043D-661	Sequence 661, App

ALIGNMENTS

RESULT 1
US-08-159-339A-374
; Sequence 374, Application US/08159339A
; Patent No. 6037135
; GENERAL INFORMATION:
; APPLICANT: Kubo, Ralph T.
; APPLICANT: Grey, Howard M.
; APPLICANT: Sette, Alessandro
; APPLICANT: Cells, Esteban
; TITLE OF INVENTION: HLA Binding peptides and Their
; TITLE OF INVENTION: Uses
; NUMBER OF SEQUENCES: 1254
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend and Crew LLP
; STREET: Two Embarcadero Center, Eighth Floor
; CITY: San Francisco
; STATE: CA
; COUNTRY: USA
; ZIP: 94111-3834
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: Fast-SEQ for Windows Version 2.0
; CURRENT APPLICATION DATA: US/08159,339A
; APPLICATION NUMBER: US/08159,339A
; FILING DATE: 29-NOV-1993
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/926,666
; FILING DATE: 07-AUG-1992
; APPLICATION NUMBER: US 08/027,746
; FILING DATE: 05-MAR-1993
; APPLICATION NUMBER: US 08/103,396
; FILING DATE: 06-AUG-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Weber, Ellen Lauver
; REGISTRATION NUMBER: 32,762
; REFERENCE/DOCKET NUMBER: 018623-005030US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; TELEX:
; INFORMATION FOR SEQ ID NO: 374:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 10 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide

US-08-159-339A-374

Query Match 100.0%; Score 54; DB 3; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.00098;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPTYK 10
Db 1 QAFTFSPTYK 10

RESULT 2

US-09-311-784A-159
Sequence 159, Application US/09311784A

Patent No. 6534482

GENERAL INFORMATION:

APPLICANT: Fikes, John D.

APPLICANT: Hermanson, Gary G.

APPLICANT: Sette, Alessandro

APPLICANT: Ishioka, Glenn Y.

APPLICANT: Livingston, Brian

APPLICANT: Chesnut, Robert W.

APPLICANT: Epiimmune Inc.

TITLE OF INVENTION: Expression Vectors for Stimulating an
Immune Response and Methods of Using the Same

FILE REFERENCE: 39963-20022.01

CURRENT APPLICATION NUMBER: US/09/311,784A

CURRENT FILING DATE: 1999-05-13

PRIOR APPLICATION NUMBER: US 60/085,751

PRIOR FILING DATE: 1998-05-15

NUMBER OF SEQ ID NOS: 463

SOFTWARE: FastSEQ for Windows Version 3.0

SEQ ID NO 159

LENGTH: 10

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: HBV pol 665 (peptide 1090.10)

US-09-311-784A-159

Query Match 100.0%; Score 54; DB 4; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.00098;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPTYK 10
Db 1 QAFTFSPTYK 10

RESULT 3

US-09-239-043D-603

Sequence 603, Application US/09239043D

Patent No. 6689363

GENERAL INFORMATION:

APPLICANT: Sette, Alessandro

APPLICANT: Sidney, John

APPLICANT: Southwood, Scott

APPLICANT: Vitiello, Maria A.

APPLICANT: Livingston, Brian D.

APPLICANT: Celis, Esteban

APPLICANT: Kubo, Ralph T.

APPLICANT: Grey, Howard M.

APPLICANT: Chesnut, Robert

APPLICANT: Epiimmune Inc.

TITLE OF INVENTION: Inducing Cellular Immune Responses to Hepatitis B Virus

FILE REFERENCE: 2060.0060007

CURRENT APPLICATION NUMBER: US/09/239,043D

CURRENT FILING DATE: 1999-01-27

PRIOR APPLICATION NUMBER: US 09/189,702

PRIOR FILING DATE: 1998-11-10

PRIOR APPLICATION NUMBER: US 08/978,291

PRIOR FILING DATE: 1997-11-25

PRIOR APPLICATION NUMBER: US 08/820,360
PRIOR FILING DATE: 1997-03-12
PRIOR APPLICATION NUMBER: US 60/013,363
PRIOR FILING DATE: 1996-03-13
PRIOR APPLICATION NUMBER: US 08/461,603
PRIOR FILING DATE: 1995-06-05
PRIOR APPLICATION NUMBER: US 08/347,610
PRIOR FILING DATE: 1994-12-01
PRIOR APPLICATION NUMBER: US 08/344,824
PRIOR FILING DATE: 1994-11-23
PRIOR APPLICATION NUMBER: US 08/278,634
PRIOR FILING DATE: 1994-07-21
PRIOR APPLICATION NUMBER: US 08/205,713
PRIOR FILING DATE: 1994-03-04
PRIOR APPLICATION NUMBER: US 08/197,484
PRIOR FILING DATE: 1994-02-16
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 2579
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 603
LENGTH: 10
TYPE: PRT
ORGANISM: Orthohepadnaviridae hepatitis B virus
US-09-239-043D-603

Query Match 100.0%; Score 54; DB 4; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.00098;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPTYK 10
Db 1 QAFTFSPTYK 10

RESULT 4

US-09-239-043D-1917

Sequence 1917, Application US/09239043D

Patent No. 6689363

GENERAL INFORMATION:

APPLICANT: Sette, Alessandro

APPLICANT: Sidney, John

APPLICANT: Southwood, Scott

APPLICANT: Vitiello, Maria A.

APPLICANT: Livingston, Brian D.

APPLICANT: Celis, Esteban

APPLICANT: Kubo, Ralph T.

APPLICANT: Grey, Howard M.

APPLICANT: Chesnut, Robert

APPLICANT: Epiimmune Inc.

TITLE OF INVENTION: Inducing Cellular Immune Responses to Hepatitis B Virus

FILE REFERENCE: 2060.0060007

CURRENT APPLICATION NUMBER: US/09/239,043D

CURRENT FILING DATE: 1999-01-27

PRIOR APPLICATION NUMBER: US 09/189,702

PRIOR FILING DATE: 1998-11-10

PRIOR APPLICATION NUMBER: US 08/978,291

PRIOR FILING DATE: 1997-11-25

PRIOR APPLICATION NUMBER: US 08/820,360

PRIOR FILING DATE: 1997-03-12

PRIOR APPLICATION NUMBER: US 60/013,363

PRIOR FILING DATE: 1996-03-13

PRIOR APPLICATION NUMBER: US 08/461,603

PRIOR FILING DATE: 1995-06-05

PRIOR APPLICATION NUMBER: US 08/347,610

PRIOR FILING DATE: 1994-12-01

PRIOR APPLICATION NUMBER: US 08/344,824

PRIOR FILING DATE: 1994-11-23

PRIOR APPLICATION NUMBER: US 08/278,634

PRIOR FILING DATE: 1994-07-21

PRIOR APPLICATION NUMBER: US 08/205,713

PRIOR FILING DATE: 1994-03-04

PRIOR APPLICATION NUMBER: US 08/197,484

; PRIOR FILING DATE: 1994-02-16
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 2579
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1917
; LENGTH: 10
; TYPE: PRT
; ORGANISM: Orthohepadnaviridae hepatitis B virus
US-09-239-043D-1917

Query Match 100.0%; Score 54; DB 4; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.00098;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 QAFSPPTYK 10
| | | | | | | | | |
DB 1 QAFSPPTYK 10

RESULT 5
US-09-239-043D-2534
; Sequence 2534, Application US/09239043D
; Patent No. 6689363
; GENERAL INFORMATION:
; APPLICANT: Sette, Alessandro
; APPLICANT: Sidney, John
; APPLICANT: Southwood, Scott
; APPLICANT: Vitiello, Maria A.
; APPLICANT: Livingston, Brian D.
; APPLICANT: Celis, Esteban
; APPLICANT: Kubo, Ralph T.
; APPLICANT: Grey, Howard M.
; APPLICANT: Chesnut, Robert
; APPLICANT: EpiImmune Inc.
; TITLE OF INVENTION: Inducing Cellular Immune Responses to Hepatitis B Virus
; FILE REFERENCE: 2060.0060007
; CURRENT FILING DATE: 1999-01-27
; PRIOR FILING DATE: 1999-01-27
; PRIOR APPLICATION NUMBER: US 09/189,702
; PRIOR FILING DATE: 1998-11-10
; PRIOR APPLICATION NUMBER: US 08/978,291
; PRIOR FILING DATE: 1997-11-25
; PRIOR APPLICATION NUMBER: US 08/820,360
; PRIOR FILING DATE: 1996-03-13
; PRIOR APPLICATION NUMBER: US 60/013,363
; PRIOR FILING DATE: 1995-06-05
; PRIOR APPLICATION NUMBER: US 08/461,603
; PRIOR FILING DATE: 1994-12-01
; PRIOR APPLICATION NUMBER: US 08/347,610
; PRIOR FILING DATE: 1994-11-23
; PRIOR APPLICATION NUMBER: US 08/278,634
; PRIOR FILING DATE: 1994-07-21
; PRIOR APPLICATION NUMBER: US 08/205,713
; PRIOR FILING DATE: 1994-03-04
; PRIOR APPLICATION NUMBER: US 08/197,484
; PRIOR FILING DATE: 1994-02-16
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 2579
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2534
; LENGTH: 10
; TYPE: PRT
; ORGANISM: Orthohepadnaviridae hepatitis B virus
US-09-239-043D-2534

Query Match 100.0%; Score 54; DB 4; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.00098;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 QAFSPPTYK 10

DB 1 QAFSPPTYK 10
| | | | | | | | | |

RESULT 6
US-09-239-043D-433
; Sequence 433, Application US/09239043D
; Patent No. 6689363
; GENERAL INFORMATION:
; APPLICANT: Sette, Alessandro
; APPLICANT: Sidney, John
; APPLICANT: Southwood, Scott
; APPLICANT: Vitiello, Maria A.
; APPLICANT: Livingston, Brian D.
; APPLICANT: Celis, Esteban
; APPLICANT: Kubo, Ralph T.
; APPLICANT: Grey, Howard M.
; APPLICANT: Chesnut, Robert
; APPLICANT: EpiImmune Inc.
; TITLE OF INVENTION: Inducing Cellular Immune Responses to Hepatitis B Virus
; FILE REFERENCE: 2060.0060007
; CURRENT FILING DATE: 1999-01-27
; PRIOR FILING DATE: 1999-01-27
; PRIOR APPLICATION NUMBER: US 09/189,702
; PRIOR FILING DATE: 1998-11-10
; PRIOR APPLICATION NUMBER: US 08/978,291
; PRIOR FILING DATE: 1997-11-25
; PRIOR APPLICATION NUMBER: US 08/820,360
; PRIOR FILING DATE: 1997-03-12
; PRIOR APPLICATION NUMBER: US 60/013,363
; PRIOR FILING DATE: 1996-03-13
; PRIOR APPLICATION NUMBER: US 08/461,603
; PRIOR FILING DATE: 1995-06-05
; PRIOR APPLICATION NUMBER: US 08/347,610
; PRIOR FILING DATE: 1994-12-01
; PRIOR APPLICATION NUMBER: US 08/344,824
; PRIOR FILING DATE: 1994-11-23
; PRIOR APPLICATION NUMBER: US 08/278,634
; PRIOR FILING DATE: 1994-07-21
; PRIOR APPLICATION NUMBER: US 08/205,713
; PRIOR FILING DATE: 1994-03-04
; PRIOR APPLICATION NUMBER: US 08/197,484
; PRIOR FILING DATE: 1994-02-16
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 2579
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 433
; LENGTH: 11
; TYPE: PRT
; ORGANISM: Orthohepadnaviridae hepatitis B virus
US-09-239-043D-433

Query Match 100.0%; Score 54; DB 4; Length 11;
Best Local Similarity 100.0%; Pred. No. 0.0011;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 QAFSPPTYK 10
| | | | | | | | | |
DB 1 QAFSPPTYK 10

RESULT 7
US-09-009-953-266
; Sequence 266, Application US/09009953
; Patent No. 6413517
; GENERAL INFORMATION:
; APPLICANT: Sette, Alessandro
; TITLE OF INVENTION: Identification of Broadly
; Reactive DR Restricted Epitopes
; NUMBER OF SEQUENCES: 274
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend and Crew LLP

STREET: Two Embarcadero Center, Eighth Floor
CITY: San Francisco
STATE: CA

ZIP: 94111-3834

COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette

COMPUTER: IBM Compatible

OPERATING SYSTEM: DOS

SOFTWARE: FastSeq for Windows Version 2.0

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/009,953

FILING DATE: 21-Jan-1998

CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 60/036,713

FILING DATE: 23-Jan-1997

APPLICATION NUMBER: US 60/037,432

FILING DATE: 07-FEB-1997

ATTORNEY/AGENT INFORMATION:

NAME: Weber, Ellen Leuwer

REGISTRATION NUMBER: 32,762

REFERENCE/DOCKET NUMBER: 018623-011520US

TELECOMMUNICATION INFORMATION:

TELEPHONE: 415-576-0200

TELEFAX: 415-576-0300

TELEX: <Unknown>

INFORMATION FOR SEQ ID NO: 266:

SEQUENCE CHARACTERISTICS:

LENGTH: 15 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION: SEQ ID NO: 266:

US-09-009-953-266

Query Match 100.0%; Score 54; DB 4; Length 15;
Best Local Similarity 100.0%; Pred. No. 0.0015;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPTYK 10
Db 2 QAFTFSPTYK 11

RESULT 8

US-09-311-784A-137

; Sequence 137, Application US/09311784A

; Patent No. 6534482

; GENERAL INFORMATION:

; APPLICANT: Fikes, John D.

; APPLICANT: Hermanson, Gary G.

; APPLICANT: Sette, Alessandro

; APPLICANT: Ishioka, Glenn Y.

; APPLICANT: Livingston, Brian

; APPLICANT: Chesnut, Robert W.

; APPLICANT: Epimmune Inc.

; TITLE OF INVENTION: Expression Vectors for Stimulating an

; FILE REFERENCE: 39963-20022.01

; CURRENT APPLICATION NUMBER: US/09/311,784A

; CURRENT FILING DATE: 1999-05-13

; PRIOR APPLICATION NUMBER: US 60/085,751

; PRIOR FILING DATE: 1998-05-15

; NUMBER OF SEQ ID NOS: 463

; SOFTWARE: FastSeq for Windows Version 3.0

; SEQ ID NO 137

; LENGTH: 15

; TYPE: PRT

; ORGANISM: Artificial Sequence

; FEATURE:

; OTHER INFORMATION: HBV POL 661 (peptide 1298.06)

US-09-311-784A-137

Query Match 100.0%; Score 54; DB 4; Length 15;

Best Local Similarity 100.0%; Pred. No. 0.0015;

Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPTYK 10

Db 2 QAFTFSPTYK 11

RESULT 9

US-09-239-043D-2122

; Sequence 2122, Application US/09239043D

; Patent No. 6689363

; GENERAL INFORMATION:

; APPLICANT: Sette, Alessandro

; APPLICANT: Sidney, John

; APPLICANT: Southwood, Scott

; APPLICANT: Vitiello, Maria A.

; APPLICANT: Livingston, Brian D.

; APPLICANT: Celis, Bateban

; APPLICANT: Kubo, Ralph T.

; APPLICANT: Grey, Howard M.

; APPLICANT: Chesnut, Robert

; APPLICANT: Epimmune Inc.

; TITLE OF INVENTION: Inducing Cellular Immune Responses to Hepatitis B Virus

; FILE REFERENCE: 2060.0060007

; CURRENT APPLICATION NUMBER: US/09/239,043D

; CURRENT FILING DATE: 1999-01-27

; PRIOR APPLICATION NUMBER: US 09/189,702

; PRIOR FILING DATE: 1998-11-10

; PRIOR APPLICATION NUMBER: US 08/978,291

; PRIOR FILING DATE: 1997-11-25

; PRIOR APPLICATION NUMBER: US 08/820,360

; PRIOR FILING DATE: 1997-03-12

; PRIOR APPLICATION NUMBER: US 60/013,363

; PRIOR FILING DATE: 1996-03-13

; PRIOR APPLICATION NUMBER: US 08/461,603

; PRIOR FILING DATE: 1995-06-05

; PRIOR APPLICATION NUMBER: US 08/347,610

; PRIOR FILING DATE: 1994-12-01

; PRIOR APPLICATION NUMBER: US 08/344,824

; PRIOR FILING DATE: 1994-11-23

; PRIOR APPLICATION NUMBER: US 08/278,634

; PRIOR FILING DATE: 1994-07-21

; PRIOR APPLICATION NUMBER: US 08/205,713

; PRIOR FILING DATE: 1994-03-04

; PRIOR APPLICATION NUMBER: US 08/197,484

; PRIOR FILING DATE: 1994-02-16

; Remaining Prior Application data removed - See File Wrapper or PALM.

; NUMBER OF SEQ ID NOS: 2579

; SOFTWARE: FastSeq for Windows Version 4.0

; SEQ ID NO 2122

; LENGTH: 15

; TYPE: PRT

; ORGANISM: Orthohepadnaviridae hepatitis B virus

US-09-239-043D-2122

Query Match 100.0%; Score 54; DB 4; Length 15;

Best Local Similarity 100.0%; Pred. No. 0.0015;

Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPTYK 10

Db 2 QAFTFSPTYK 11

RESULT 10

US-09-239-043D-2556

; Sequence 2556, Application US/09239043D

; Patent No. 6689363

```
; GENERAL INFORMATION:
; APPLICANT: Sette, Alessandro
; APPLICANT: Sidney, John
; APPLICANT: Southwood, Scott
; APPLICANT: Vitiello, Maria A.
; APPLICANT: Livingston, Brian D.
; APPLICANT: Celis, Esteban
; APPLICANT: Kubo, Ralph T.
; APPLICANT: Grey, Howard M.
; APPLICANT: Chesnut, Robert
; APPLICANT: Epimmune Inc.
; TITLE OF INVENTION: Inducing Cellular Immune Responses to Hepatitis B Virus
; FILE REFERENCE: 2060.0060007
; CURRENT APPLICATION NUMBER: US/09/239,043D
; CURRENT FILING DATE: 1999-01-27
; PRIOR APPLICATION NUMBER: US 09/189,702
; PRIOR FILING DATE: 1998-11-10
; PRIOR APPLICATION NUMBER: US 08/978,291
; PRIOR FILING DATE: 1997-11-25
; PRIOR APPLICATION NUMBER: US 08/820,360
; PRIOR FILING DATE: 1997-03-12
; PRIOR APPLICATION NUMBER: US 60/013,363
; PRIOR FILING DATE: 1996-03-13
; PRIOR APPLICATION NUMBER: US 08/461,603
; PRIOR FILING DATE: 1995-06-05
; PRIOR APPLICATION NUMBER: US 08/347,610
; PRIOR FILING DATE: 1994-12-01
; PRIOR APPLICATION NUMBER: US 08/344,824
; PRIOR FILING DATE: 1994-11-23
; PRIOR APPLICATION NUMBER: US 08/278,634
; PRIOR FILING DATE: 1994-07-21
; PRIOR APPLICATION NUMBER: US 08/205,713
; PRIOR FILING DATE: 1994-03-04
; PRIOR APPLICATION NUMBER: US 08/197,484
; PRIOR FILING DATE: 1994-02-16
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 2579
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2556
; LENGTH: 15
; TYPE: PRT
; ORGANISM: Orthohepadnaviridae hepatitis B virus
US-09-239-043D-2556

Query Match      100.0%; Score 54; DB 4; Length 15;
Best Local Similarity 100.0%; Pred. No. 0.0015;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 QAFTSPTYK 10
DB      2 QAFTSPTYK 11

RESULT 11
US-08-591-502B-49
; Sequence 49, Application US/08591502B
; Patent No. 6607727
; GENERAL INFORMATION:
; APPLICANT: Chisari, Francis V.
; TITLE OF INVENTION: Peptides for Inducing Cytotoxic T
; Lymphocyte Responses to Hepatitis B Virus
; NUMBER OF SEQUENCES: 99
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend and Crew LLP
; STREET: Two Embarcadero Center, Eighth Floor
; CITY: San Francisco
; STATE: California
; COUNTRY: USA
; ZIP: 94111-3834
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/591,502B
; FILING DATE: 20-May-1996
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/749,540
; FILING DATE: 26-AUG-1991
; APPLICATION NUMBER: US 07/935,898
; FILING DATE: 26-AUG-1992
; APPLICATION NUMBER: US 08/100,870
; FILING DATE: 02-AUG-1993
; APPLICATION NUMBER: WO PCT/US94/08685
; FILING DATE: 01-AUG-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Weber, Ellen Lauver
; REGISTRATION NUMBER: 32,762
; REFERENCE/DOCKET NUMBER: 014740-0002300US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 49:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 730 amino acids
; TYPE: amino acid
; STRANDEDNESS: <Unknown>
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 49:
US-08-591-502B-49

Query Match      100.0%; Score 54; DB 4; Length 730;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 QAFTSPTYK 10
DB      665 QAFTSPTYK 674

RESULT 12
US-08-591-502B-60
; Sequence 60, Application US/08591502B
; Patent No. 6607727
; GENERAL INFORMATION:
; APPLICANT: Chisari, Francis V.
; TITLE OF INVENTION: Peptides for Inducing Cytotoxic T
; Lymphocyte Responses to Hepatitis B Virus
; NUMBER OF SEQUENCES: 99
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend and Crew LLP
; STREET: Two Embarcadero Center, Eighth Floor
; CITY: San Francisco
; STATE: California
; COUNTRY: USA
; ZIP: 94111-3834
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/591,502B
; FILING DATE: 20-May-1996
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/749,540
; FILING DATE: 26-AUG-1991
; APPLICATION NUMBER: US 07/935,898
; FILING DATE: 26-AUG-1992
; APPLICATION NUMBER: US 08/100,870
; FILING DATE: 02-AUG-1993
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; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/591,502B
; FILING DATE: 20-May-1996
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/749,540
; FILING DATE: 26-AUG-1991
; APPLICATION NUMBER: US 07/935,898
; FILING DATE: 26-AUG-1992
; APPLICATION NUMBER: US 08/100,870
; FILING DATE: 02-AUG-1993
; APPLICATION NUMBER: WO PCT/US94/08685
; FILING DATE: 01-AUG-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Weber, Ellen Lauver
; REGISTRATION NUMBER: 32,762
; REFERENCE/DOCKET NUMBER: 014740-0002300US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 49:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 730 amino acids
; TYPE: amino acid
; STRANDEDNESS: <Unknown>
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 49:
US-08-591-502B-49

Query Match      100.0%; Score 54; DB 4; Length 730;
Best Local Similarity 100.0%; Pred. No. 0.075;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 QAFTSPTYK 10
DB      665 QAFTSPTYK 674

RESULT 12
US-08-591-502B-60
; Sequence 60, Application US/08591502B
; Patent No. 6607727
; GENERAL INFORMATION:
; APPLICANT: Chisari, Francis V.
; TITLE OF INVENTION: Peptides for Inducing Cytotoxic T
; Lymphocyte Responses to Hepatitis B Virus
; NUMBER OF SEQUENCES: 99
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend and Crew LLP
; STREET: Two Embarcadero Center, Eighth Floor
; CITY: San Francisco
; STATE: California
; COUNTRY: USA
; ZIP: 94111-3834
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/591,502B
; FILING DATE: 20-May-1996
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/749,540
; FILING DATE: 26-AUG-1991
; APPLICATION NUMBER: US 07/935,898
; FILING DATE: 26-AUG-1992
; APPLICATION NUMBER: US 08/100,870
; FILING DATE: 02-AUG-1993
```

```
; APPLICATION NUMBER: WO PCT/US94/08685
; FILING DATE: 01-AUG-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Weber, Ellen Lauver
; REGISTRATION NUMBER: 32,762
; REFERENCE/DOCKET NUMBER: 014740-000230US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 60:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 832 amino acids
; TYPE: amino acid
; STRANDEDNESS: <Unknown>
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 60:
US-08-591-502B-60
Query Match 100.0%; Score 54; DB 4; Length 832;
Best Local Similarity 100.0%; Pred. No. 0.086;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPYK 10
Db 654 QAFTFSPYK 663

RESULT 13
US-08-591-502B-61
; Sequence 61, Application US/08591502B
; Patent No. 6607727
; GENERAL INFORMATION:
; APPLICANT: Chisari, Francis V.
; TITLE OF INVENTION: Peptides for Inducing Cytotoxic T
; Lymphocyte Responses to Hepatitis B Virus
; NUMBER OF SEQUENCES: 99
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend and Crew LLP
; STREET: Two Embarcadero Center, Eighth Floor
; CITY: San Francisco
; STATE: California
; COUNTRY: USA
; ZIP: 94111-3834
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/591,502B
; FILING DATE: 20-May-1996
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/749,540
; FILING DATE: 26-AUG-1991
; APPLICATION NUMBER: US 07/935,898
; FILING DATE: 26-AUG-1992
; APPLICATION NUMBER: US 08/100,870
; FILING DATE: 02-AUG-1993
; APPLICATION NUMBER: WO PCT/US94/08685
; FILING DATE: 01-AUG-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Weber, Ellen Lauver
; REGISTRATION NUMBER: 32,762
; REFERENCE/DOCKET NUMBER: 014740-000230US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 61:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 832 amino acids
; TYPE: amino acid
; STRANDEDNESS: <Unknown>
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 61:
US-08-591-502B-61
Query Match 100.0%; Score 54; DB 4; Length 832;
Best Local Similarity 100.0%; Pred. No. 0.086;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPYK 10
Db 654 QAFTFSPYK 663
```

```
; STRANDEDNESS: <Unknown>
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 61:
US-08-591-502B-61
Query Match 100.0%; Score 54; DB 4; Length 832;
Best Local Similarity 100.0%; Pred. No. 0.086;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPYK 10
Db 654 QAFTFSPYK 663

RESULT 14
US-08-591-502B-62
; Sequence 62, Application US/08591502B
; Patent No. 6607727
; GENERAL INFORMATION:
; APPLICANT: Chisari, Francis V.
; TITLE OF INVENTION: Peptides for Inducing Cytotoxic T
; Lymphocyte Responses to Hepatitis B Virus
; NUMBER OF SEQUENCES: 99
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend and Crew LLP
; STREET: Two Embarcadero Center, Eighth Floor
; CITY: San Francisco
; STATE: California
; COUNTRY: USA
; ZIP: 94111-3834
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/591,502B
; FILING DATE: 20-May-1996
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/749,540
; FILING DATE: 26-AUG-1991
; APPLICATION NUMBER: US 07/935,898
; FILING DATE: 26-AUG-1992
; APPLICATION NUMBER: US 08/100,870
; FILING DATE: 02-AUG-1993
; APPLICATION NUMBER: WO PCT/US94/08685
; FILING DATE: 01-AUG-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Weber, Ellen Lauver
; REGISTRATION NUMBER: 32,762
; REFERENCE/DOCKET NUMBER: 014740-000230US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 62:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 832 amino acids
; TYPE: amino acid
; STRANDEDNESS: <Unknown>
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 62:
US-08-591-502B-62
Query Match 100.0%; Score 54; DB 4; Length 832;
Best Local Similarity 100.0%; Pred. No. 0.086;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPYK 10
Db 654 QAFTFSPYK 663
```

RESULT 15
US-08-591-502B-63
; Sequence 63, Application US/08591502B
; Patent No. 6607727
; GENERAL INFORMATION:
; APPLICANT: Chisari, Francis V.
; TITLE OF INVENTION: Peptides for Inducing Cytotoxic T
; Lymphocyte Responses to Hepatitis B Virus
; NUMBER OF SEQUENCES: 99
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend and Crew LLP
; STREET: Two Embarcadero Center, Eighth Floor
; CITY: San Francisco
; STATE: California
; COUNTRY: USA
; ZIP: 94111-3834
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA: US/08/591,502B
; FILING DATE: 20-May-1996
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/749,540
; FILING DATE: 26-AUG-1991
; APPLICATION NUMBER: US 07/935,898
; FILING DATE: 26-AUG-1992
; APPLICATION NUMBER: US 08/100,870
; FILING DATE: 02-AUG-1993
; APPLICATION NUMBER: WO PCT/US94/08685
; FILING DATE: 01-AUG-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Weber, Ellen Lauver
; REGISTRATION NUMBER: 32,762
; REFERENCE/DOCKET NUMBER: 014740-000230US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 63:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 832 amino acids
; TYPE: amino acid
; STRANDEDNESS: <Unknown>
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 63:
US-08-591-502B-63

Query Match 100.0%; Score 54; DB 4; Length 832;
Best Local Similarity 100.0%; Pred. NO. 0.086;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 QAFTFSPYK 10
Db 654 QAFTFSPYK 663

Search completed: June 28, 2005, 09:15:02
Job time : 42 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: June 28, 2005, 09:10:44 ; Search time 158 Seconds
(without alignments)
24.338 Million cell updates/sec

Title: US-09-350-401b-638

Perfect score: 54

Sequence: 1 QAF7SPYK 10

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1717557 seqs, 384547976 residues

Total number of hits satisfying chosen parameters: 1717557

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA.*

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3: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep.*
4: /cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep.*
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18: /cgn2_6/ptodata/2/pubpaa/US10F_PUBCOMB.pep.*
19: /cgn2_6/ptodata/2/pubpaa/US10G_PUBCOMB.pep.*
20: /cgn2_6/ptodata/2/pubpaa/US11_NEW_PUB.pep.*
21: /cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep.*
22: /cgn2_6/ptodata/2/pubpaa/US60_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	54	100.0	10	9	US-09-894-018-300
2	54	100.0	10	14	US-10-239-313A-325
3	54	100.0	10	15	US-10-371-525-137
4	54	100.0	10	15	US-10-371-525-159
5	54	100.0	10	15	US-10-371-645-159
6	54	100.0	10	15	US-10-371-260-159
7	54	100.0	10	15	US-10-474-960A-300
8	54	100.0	10	17	US-10-474-960A-601-603
9	54	100.0	10	17	US-10-474-960A-1917
10	54	100.0	10	17	US-10-654-601-2534
11	54	100.0	11	17	US-10-654-601-433

12	54	100.0	15	13	US-10-103-395-266	Sequence 266, App
13	54	100.0	15	15	US-10-371-525-137	Sequence 137, App
14	54	100.0	15	15	US-10-371-069-137	Sequence 137, App
15	54	100.0	15	15	US-10-371-645-137	Sequence 137, App
16	54	100.0	15	15	US-10-371-260-137	Sequence 137, App
17	54	100.0	15	16	US-10-474-960A-415	Sequence 415, App
18	54	100.0	15	17	US-10-654-601-2122	Sequence 2122, App
19	54	100.0	15	17	US-10-654-601-2556	Sequence 2556, App
20	54	100.0	123	9	US-09-894-018-109	Sequence 109, App
21	54	100.0	123	16	US-10-474-960A-109	Sequence 109, App
22	54	100.0	206	9	US-09-894-018-111	Sequence 111, App
23	54	100.0	206	16	US-10-474-960A-111	Sequence 111, App
24	54	100.0	219	9	US-09-894-018-113	Sequence 113, App
25	54	100.0	219	16	US-10-474-960A-113	Sequence 113, App
26	54	100.0	295	16	US-10-474-960A-388	Sequence 388, App
27	54	100.0	296	16	US-10-474-960A-390	Sequence 390, App
28	54	100.0	333	16	US-10-474-960A-384	Sequence 384, App
29	54	100.0	333	16	US-10-474-960A-386	Sequence 386, App
30	54	100.0	344	16	US-10-474-960A-398	Sequence 398, App
31	54	100.0	403	16	US-10-474-960A-392	Sequence 392, App
32	54	100.0	403	16	US-10-474-960A-394	Sequence 394, App
33	54	100.0	410	16	US-10-474-960A-396	Sequence 396, App
34	54	100.0	730	14	US-10-359-431-49	Sequence 49, Appl
35	54	100.0	832	14	US-10-359-431-60	Sequence 60, Appl
36	54	100.0	832	14	US-10-359-431-61	Sequence 61, Appl
37	54	100.0	832	14	US-10-359-431-62	Sequence 62, Appl
38	54	100.0	832	14	US-10-359-431-63	Sequence 63, Appl
39	54	100.0	832	14	US-10-359-431-64	Sequence 64, Appl
40	54	100.0	842	14	US-10-359-431-50	Sequence 50, Appl
41	54	100.0	842	14	US-10-359-431-51	Sequence 51, Appl
42	54	100.0	843	14	US-10-209-264-2	Sequence 2, Appl
43	54	100.0	843	14	US-10-359-431-45	Sequence 45, Appl
44	54	100.0	843	14	US-10-359-431-47	Sequence 47, Appl
45	54	100.0	843	14	US-10-359-431-48	Sequence 48, Appl

ALIGNMENTS

RESULT 1

US-09-894-018-300
; Sequence 300, Application US/09894018
; Patent No. US20020119127A1
; GENERAL INFORMATION:
; APPLICANT: EPIMMUNE, Inc.
; APPLICANT: Sette, Alessandro
; APPLICANT: Chestnut, Robert
; APPLICANT: Livingston, Brian
; APPLICANT: Baker, Dennis
; APPLICANT: Newman, Mark
; APPLICANT: Brown, David
; TITLE OF INVENTION: METHODS AND SYSTEM FOR OPTIMIZING
; FILE REFERENCE: 39863-20033.00
; CURRENT APPLICATION NUMBER: US/09/894,018
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: PCT/US00/35568
; PRIOR FILING DATE: 2000-12-28
; PRIOR APPLICATION NUMBER: US 60/173,390
; PRIOR FILING DATE, 1999-12-28
; PRIOR APPLICATION NUMBER: US 60/284,221
; PRIOR FILING DATE: 2001-04-16
; NUMBER OF SEQ ID NOS: 368
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 300
; LENGTH: 10
; TYPE: PRT
; ORGANISM: Transgenic mouse
US-09-894-018-300

Query Match 100.0%; Score 54; DB 9; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0025;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy 1 QAFTFSPTYK 10
Db 1 QAFTFSPTYK 10

Query Match 100.0%; Score 54; DB 15; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0025;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

RESULT 2
US-10-239-313A-325
; Sequence 325, Application US/10239313A
; Publication No. US20030175285A1
; GENERAL INFORMATION:
; APPLICANT: KLINGUER - HAMOUR, Christine
; APPLICANT: CORVAIA, Nathalie
; APPLICANT: BECK, Alain
; APPLICANT: GOETSCH, Liliane
; TITLE OF INVENTION: MOLECULE OF PHARMACEUTICAL INTEREST COMPRISING AT ITS
; TITLE OF INVENTION: N-TERMINAL A GLUTAMIC ACID OR A GLUTAMINE IN THE FORM
; FILE REFERENCE: 343 727 - US
; CURRENT APPLICATION NUMBER: US/10/239,313A
; CURRENT FILING DATE: 2002-09-19
; PRIOR APPLICATION NUMBER: FR 00/03711
; PRIOR FILING DATE: 2000-03-23
; PRIOR APPLICATION NUMBER: PCT 01/70772
; PRIOR FILING DATE: 2001-03-22
; NUMBER OF SEQ ID NOS: 697
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 325
; LENGTH: 10
; TYPE: PRT
; ORGANISM: Hepatitis B virus
US-10-239-313A-325

Query Match 100.0%; Score 54; DB 14; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0025;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPTYK 10
Db 1 QAFTFSPTYK 10

RESULT 3
US-10-371-525-159
; Sequence 159, Application US/10371525
; Publication No. US20030203869A1
; GENERAL INFORMATION:
; APPLICANT: Fikes, John D.
; APPLICANT: Hermanson, Gary G.
; APPLICANT: Sette, Alessandro
; APPLICANT: Ishioka, Glenn Y.
; APPLICANT: Livingston, Brian
; APPLICANT: Chesnut, Robert W.
; APPLICANT: Epimmune Inc.
; TITLE OF INVENTION: Expression Vectors for Stimulating an
; FILE REFERENCE: 39963-20022.01
; CURRENT APPLICATION NUMBER: US/10/371,525
; CURRENT FILING DATE: 2003-02-21
; PRIOR APPLICATION NUMBER: US 09/311,784
; PRIOR FILING DATE: 1999-05-13
; PRIOR APPLICATION NUMBER: US 60/085,751
; PRIOR FILING DATE: 1998-05-15
; NUMBER OF SEQ ID NOS: 463
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 159
; LENGTH: 10
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: HBV pol 665 (peptide 1090.10)
US-10-371-525-159

Query Match 100.0%; Score 54; DB 15; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0025;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPTYK 10
Db 1 QAFTFSPTYK 10

RESULT 4
US-10-371-069-159
; Sequence 159, Application US/10371069
; Publication No. US20030216342A1
; GENERAL INFORMATION:
; APPLICANT: EPIMUNE Inc.
; APPLICANT: Fikes, John D.
; APPLICANT: Hermanson, Gary G.
; APPLICANT: Sette, Alessandro
; APPLICANT: Ishioka, Glenn Y.
; APPLICANT: Livingston, Brian
; APPLICANT: Chesnut, Robert W.
; APPLICANT: Epimmune Inc.
; TITLE OF INVENTION: Expression Vectors for Stimulating an
; FILE REFERENCE: 39963-20022.10
; CURRENT APPLICATION NUMBER: US/10/371,069
; CURRENT FILING DATE: 2003-02-21
; PRIOR APPLICATION NUMBER: US 09/078,904
; PRIOR FILING DATE: 1998-05-13
; PRIOR APPLICATION NUMBER: US 60/085,751
; PRIOR FILING DATE: 1998-05-15
; NUMBER OF SEQ ID NOS: 463
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 159
; LENGTH: 10
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: HBV pol 665 (peptide 1090.10)
US-10-371-069-159

Query Match 100.0%; Score 54; DB 15; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0025;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPTYK 10
Db 1 QAFTFSPTYK 10

RESULT 5
US-10-371-645-159
; Sequence 159, Application US/10371645
; Publication No. US20030216343A1
; GENERAL INFORMATION:
; APPLICANT: EPIMUNE Inc.
; APPLICANT: Fikes, John D.
; APPLICANT: Hermanson, Gary G.
; APPLICANT: Sette, Alessandro
; APPLICANT: Ishioka, Glenn Y.
; APPLICANT: Livingston, Brian
; APPLICANT: Chesnut, Robert W.
; APPLICANT: Epimmune Inc.
; TITLE OF INVENTION: Expression Vectors for Stimulating an
; FILE REFERENCE: 39963-20022.11
; CURRENT APPLICATION NUMBER: US/10/371,645
; CURRENT FILING DATE: 2003-06-20
; PRIOR APPLICATION NUMBER: US 09/078,904
; PRIOR FILING DATE: 1998-05-13
; PRIOR APPLICATION NUMBER: US 60/085,751
; PRIOR FILING DATE: 1998-05-15
; NUMBER OF SEQ ID NOS: 463
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; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 159
; LENGTH: 10
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: HBV pol 665 (peptide 1090.10)
US-10-371-645-159

Query Match      100.0%; Score 54; DB 15; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0025;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFSPPTYK 10
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Db 1 QAFSPPTYK 10

RESULT 6
US-10-371-260-159
; Sequence 159, Application US/10371260
; Publication No. US20030220285A1
; GENERAL INFORMATION:
; APPLICANT: EPIMMUNE INC.
; APPLICANT: Fikes, John D.
; APPLICANT: Hermanson, Gary G.
; APPLICANT: Sette, Alessandro
; APPLICANT: Ishioka, Glenn Y.
; APPLICANT: Livingston, Brian
; APPLICANT: Cheenut, Robert W.
; APPLICANT: Epimmune Inc.
; TITLE OF INVENTION: Expression Vectors for Stimulating an
; TITLE OF INVENTION: Immune Response and Methods of Using the Same
; FILE REFERENCE: 39963-20022.13
; CURRENT APPLICATION NUMBER: US/10/371,260
; CURRENT FILING DATE: 2003-02-21
; PRIOR APPLICATION NUMBER: US 09/078,904
; PRIOR FILING DATE: 1998-05-13
; PRIOR APPLICATION NUMBER: US 60/085,751
; PRIOR FILING DATE: 1998-05-15
; NUMBER OF SEQ ID NOS: 463
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 159
; LENGTH: 10
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: HBV pol 665 (peptide 1090.10)
US-10-371-260-159

Query Match      100.0%; Score 54; DB 15; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0025;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFSPPTYK 10
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Db 1 QAFSPPTYK 10

RESULT 7
US-10-474-960A-300
; Sequence 300, Application US/10474960A
; Publication No. US20040248113A1
; GENERAL INFORMATION:
; APPLICANT: Sette, Alessandro
; APPLICANT: Cheenut, Robert
; APPLICANT: Livingston, Brian
; APPLICANT: Baker, Denise
; APPLICANT: Newman, Mark
; APPLICANT: Brown, David
; TITLE OF INVENTION: Methods and System for Optimizing Multi-epitope Nucleic
; TITLE OF INVENTION: Acid Constructs and Peptides Encoded Thereby
; FILE REFERENCE: 2060.0320004

; CURRENT APPLICATION NUMBER: US/10/474,960A
; CURRENT FILING DATE: 2003-10-16
; PRIOR APPLICATION NUMBER: PCT/US02/09877
; PRIOR FILING DATE: 2002-03-28
; PRIOR APPLICATION NUMBER: US 09/894,018
; PRIOR FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: US 60/284,221
; PRIOR FILING DATE: 2001-04-16
; NUMBER OF SEQ ID NOS: 419
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 300
; LENGTH: 10
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Sequence for epitope
US-10-474-960A-300

Query Match      100.0%; Score 54; DB 16; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0025;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFSPPTYK 10
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Db 1 QAFSPPTYK 10

RESULT 8
US-10-654-601-603
; Sequence 603, Application US/10654601
; Publication No. US20050063983A1
; GENERAL INFORMATION:
; APPLICANT: Sette, Alessandro
; APPLICANT: Sidney, John
; APPLICANT: Southwood, Scott
; APPLICANT: Vitiello, Maria A.
; APPLICANT: Livingston, Brian D.
; APPLICANT: Celis, Esteban
; APPLICANT: Kubo, Ralph T.
; APPLICANT: Grey, Howard M.
; APPLICANT: Cheenut, Robert
; APPLICANT: Epimmune Inc.
; TITLE OF INVENTION: Inducing Cellular Immune Responses to Hepatitis B Virus
; TITLE OF INVENTION: Using Peptide and Nucleic Acid Compositions
; FILE REFERENCE: 2060.0060007
; CURRENT APPLICATION NUMBER: US/10/654,601
; CURRENT FILING DATE: 2003-09-04
; PRIOR APPLICATION NUMBER: US/09/239,043
; PRIOR FILING DATE: 1999-01-27
; PRIOR APPLICATION NUMBER: US 09/189,702
; PRIOR FILING DATE: 1998-11-10
; PRIOR APPLICATION NUMBER: US 08/978,291
; PRIOR FILING DATE: 1997-11-25
; PRIOR APPLICATION NUMBER: US 08/820,360
; PRIOR FILING DATE: 1997-03-12
; PRIOR APPLICATION NUMBER: US 60/013,363
; PRIOR FILING DATE: 1996-03-13
; PRIOR APPLICATION NUMBER: US 08/461,603
; PRIOR FILING DATE: 1995-06-05
; PRIOR APPLICATION NUMBER: US 08/347,610
; PRIOR FILING DATE: 1994-12-01
; PRIOR APPLICATION NUMBER: US 08/344,824
; PRIOR FILING DATE: 1994-11-23
; PRIOR APPLICATION NUMBER: US 08/278,634
; PRIOR FILING DATE: 1994-07-21
; PRIOR APPLICATION NUMBER: US 08/205,713
; PRIOR FILING DATE: 1994-03-04
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 2579
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 603
; LENGTH: 10
; TYPE: PRT
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; ORGANISM: Orthohepadnaviridae hepatitis B virus
US-10-654-601-603

Query Match      100.0%; Score 54; DB 17; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0025;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPYK 10
Db 1 QAFTFSPYK 10

RESULT 9
US-10-654-601-1917
; Sequence 1917, Application US/10654601
; Publication No. US20050063983A1
; GENERAL INFORMATION:
; APPLICANT: Sette, Alessandro
; APPLICANT: Sidney, John
; APPLICANT: Southwood, Scott
; APPLICANT: Vitiello, Maria A.
; APPLICANT: Livingston, Brian D.
; APPLICANT: Celis, Esteban
; APPLICANT: Kubo, Ralph T.
; APPLICANT: Grey, Howard M.
; APPLICANT: Chesnut, Robert
; APPLICANT: Epiimmune Inc.
; TITLE OF INVENTION: Inducing Cellular Immune Responses to Hepatitis B Virus
; FILE REFERENCE: 2060.0060007
; CURRENT FILING DATE: 2003-09-04
; PRIOR APPLICATION NUMBER: US/09/239,043
; PRIOR FILING DATE: 1999-01-27
; PRIOR APPLICATION NUMBER: US 09/189,702
; PRIOR FILING DATE: 1998-11-10
; PRIOR APPLICATION NUMBER: US 08/978,291
; PRIOR FILING DATE: 1997-11-25
; PRIOR APPLICATION NUMBER: US 08/820,360
; PRIOR FILING DATE: 1997-03-12
; PRIOR APPLICATION NUMBER: US 60/013,363
; PRIOR FILING DATE: 1996-03-13
; PRIOR APPLICATION NUMBER: US 08/461,603
; PRIOR FILING DATE: 1995-06-05
; PRIOR APPLICATION NUMBER: US 08/347,610
; PRIOR FILING DATE: 1994-12-01
; PRIOR APPLICATION NUMBER: US 08/344,824
; PRIOR FILING DATE: 1994-11-23
; PRIOR APPLICATION NUMBER: US 08/278,634
; PRIOR FILING DATE: 1994-07-21
; PRIOR APPLICATION NUMBER: US 08/205,713
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 2579
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1917
; LENGTH: 10
; TYPE: PRT
; ORGANISM: Orthohepadnaviridae hepatitis B virus
US-10-654-601-1917

Query Match      100.0%; Score 54; DB 17; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0025;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPYK 10
Db 1 QAFTFSPYK 10

RESULT 10
US-10-654-601-2534
; Sequence 2534, Application US/10654601
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; Publication No. US20050063983A1
; GENERAL INFORMATION:
; APPLICANT: Sette, Alessandro
; APPLICANT: Sidney, John
; APPLICANT: Southwood, Scott
; APPLICANT: Vitiello, Maria A.
; APPLICANT: Livingston, Brian D.
; APPLICANT: Celis, Esteban
; APPLICANT: Kubo, Ralph T.
; APPLICANT: Grey, Howard M.
; APPLICANT: Chesnut, Robert
; APPLICANT: Epiimmune Inc.
; TITLE OF INVENTION: Inducing Cellular Immune Responses to Hepatitis B Virus
; FILE REFERENCE: 2060.0060007
; CURRENT FILING DATE: 2003-09-04
; PRIOR APPLICATION NUMBER: US/09/239,043
; PRIOR FILING DATE: 1999-01-27
; PRIOR APPLICATION NUMBER: US 09/189,702
; PRIOR FILING DATE: 1998-11-10
; PRIOR APPLICATION NUMBER: US 08/978,291
; PRIOR FILING DATE: 1997-11-25
; PRIOR APPLICATION NUMBER: US 08/820,360
; PRIOR FILING DATE: 1997-03-12
; PRIOR APPLICATION NUMBER: US 60/013,363
; PRIOR FILING DATE: 1996-03-13
; PRIOR APPLICATION NUMBER: US 08/461,603
; PRIOR FILING DATE: 1995-06-05
; PRIOR APPLICATION NUMBER: US 08/347,610
; PRIOR FILING DATE: 1994-12-01
; PRIOR APPLICATION NUMBER: US 08/344,824
; PRIOR FILING DATE: 1994-11-23
; PRIOR APPLICATION NUMBER: US 08/278,634
; PRIOR FILING DATE: 1994-07-21
; PRIOR APPLICATION NUMBER: US 08/205,713
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 2579
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2534
; LENGTH: 10
; TYPE: PRT
; ORGANISM: Orthohepadnaviridae hepatitis B virus
US-10-654-601-2534

Query Match      100.0%; Score 54; DB 17; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0025;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPYK 10
Db 1 QAFTFSPYK 10

RESULT 11
US-10-654-601-433
; Sequence 433, Application US/10654601
; Publication No. US20050063983A1
; GENERAL INFORMATION:
; APPLICANT: Sette, Alessandro
; APPLICANT: Sidney, John
; APPLICANT: Southwood, Scott
; APPLICANT: Vitiello, Maria A.
; APPLICANT: Livingston, Brian D.
; APPLICANT: Celis, Esteban
; APPLICANT: Kubo, Ralph T.
; APPLICANT: Grey, Howard M.
; APPLICANT: Chesnut, Robert
; APPLICANT: Epiimmune Inc.
; TITLE OF INVENTION: Inducing Cellular Immune Responses to Hepatitis B Virus
; FILE REFERENCE: 2060.0060007
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CURRENT APPLICATION NUMBER: US/10/654,601
; CURRENT FILING DATE: 2003-09-04
; PRIOR APPLICATION NUMBER: US/09/239,043
; PRIOR FILING DATE: 1999-01-27
; PRIOR APPLICATION NUMBER: US 09/189,702
; PRIOR FILING DATE: 1998-11-10
; PRIOR APPLICATION NUMBER: US 08/978,291
; PRIOR FILING DATE: 1997-11-25
; PRIOR APPLICATION NUMBER: US 08/820,360
; PRIOR FILING DATE: 1997-03-12
; PRIOR APPLICATION NUMBER: US 60/013,363
; PRIOR FILING DATE: 1996-03-13
; PRIOR APPLICATION NUMBER: US 08/461,603
; PRIOR FILING DATE: 1995-06-05
; PRIOR APPLICATION NUMBER: US 08/347,610
; PRIOR FILING DATE: 1994-12-01
; PRIOR APPLICATION NUMBER: US 08/344,824
; PRIOR FILING DATE: 1994-11-23
; PRIOR APPLICATION NUMBER: US 08/278,634
; PRIOR FILING DATE: 1994-07-21
; PRIOR APPLICATION NUMBER: US 08/205,713
; PRIOR FILING DATE: 1994-03-04
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 2579
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 433
; LENGTH: 11
; TYPE: PRT
; ORGANISM: Orthohepadnaviridae hepatitis B virus
US-10-654-601-433

Query Match 100.0%; Score 54; DB 17; Length 11;
Best Local Similarity 100.0%; Pred. No. 0.0027;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPTYK 10
| | | | | | | | | |
Db 1 QAFTFSPTYK 10

RESULT 12
US-10-103-395-266
; Sequence 266, Application US/10/103395
; Publication No. US20020160019A1
; GENERAL INFORMATION:
; APPLICANT: EPIMMUNE, Inc.
; APPLICANT: Sette, Alessandro
; APPLICANT: Sidney, John
; APPLICANT: Southwood, Scott
; TITLE OF INVENTION: IDENTIFICATION OF BROADLY REACTIVE DR
; FILE REFERENCE: 39963-20016.01
; CURRENT APPLICATION NUMBER: US/10/103,395
; CURRENT FILING DATE: 2003-01-03
; PRIOR APPLICATION NUMBER: US 09/009,953
; PRIOR FILING DATE: 1998-01-21
; PRIOR APPLICATION NUMBER: PCT/US98/01373
; PRIOR FILING DATE: 1998-01-23
; PRIOR APPLICATION NUMBER: US 60/036,713
; PRIOR FILING DATE: 1997-01-23
; PRIOR APPLICATION NUMBER: US 60/037,432
; PRIOR FILING DATE: 1997-02-07
; NUMBER OF SEQ ID NOS: 274
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 266
; LENGTH: 15
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-103-395-266

Query Match 100.0%; Score 54; DB 13; Length 15;
Best Local Similarity 100.0%; Pred. No. 0.0038;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPTYK 10
| | | | | | | | | |
Db 2 QAFTFSPTYK 11

RESULT 13
US-10-371-525-137
; Sequence 137, Application US/10371525
; Publication No. US20030203869A1
; GENERAL INFORMATION:
; APPLICANT: Fikes, John D.
; APPLICANT: Hermanson, Gary G.
; APPLICANT: Sette, Alessandro
; APPLICANT: Ishioka, Glenn Y.
; APPLICANT: Livingston, Brian
; APPLICANT: Chesnut, Robert W.
; APPLICANT: Epimmune Inc.
; TITLE OF INVENTION: Expression Vectors for Stimulating an
; FILE REFERENCE: 39963-20022.01
; CURRENT APPLICATION NUMBER: US/10/371,525
; CURRENT FILING DATE: 2003-02-21
; PRIOR APPLICATION NUMBER: US 09/311,784
; PRIOR FILING DATE: 1999-05-13
; PRIOR APPLICATION NUMBER: US 60/085,751
; PRIOR FILING DATE: 1998-05-15
; NUMBER OF SEQ ID NOS: 463
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 137
; LENGTH: 15
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: HBV POL 661 (peptide 1298.06)
US-10-371-525-137

Query Match 100.0%; Score 54; DB 15; Length 15;
Best Local Similarity 100.0%; Pred. No. 0.0038;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QAFTFSPTYK 10
| | | | | | | | | |
Db 2 QAFTFSPTYK 11

RESULT 14
US-10-371-069-137
; Sequence 137, Application US/10371069
; Publication No. US20030216342A1
; GENERAL INFORMATION:
; APPLICANT: EPIMMUNE Inc.
; APPLICANT: Fikes, John D.
; APPLICANT: Hermanson, Gary G.
; APPLICANT: Sette, Alessandro
; APPLICANT: Ishioka, Glenn Y.
; APPLICANT: Livingston, Brian
; APPLICANT: Chesnut, Robert W.
; APPLICANT: Epimmune Inc.
; TITLE OF INVENTION: Expression Vectors for Stimulating an
; FILE REFERENCE: 39963-20022.10
; CURRENT APPLICATION NUMBER: US/10/371,069
; CURRENT FILING DATE: 2003-02-21
; PRIOR APPLICATION NUMBER: US 09/078,904
; PRIOR FILING DATE: 1998-05-13
; PRIOR APPLICATION NUMBER: US 60/085,751
; PRIOR FILING DATE: 1998-05-15
; NUMBER OF SEQ ID NOS: 463
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 137
; LENGTH: 15
; TYPE: PRT

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; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: HBV POL 661 (peptide 1298.06)
US-10-371-645-137

Query Match      100.0%; Score 54; DB 15; Length 15;
Best Local Similarity 100.0%; Pred. No. 0.0038;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      1 QAFTFSPTYK 10
Db      2 QAFTFSPTYK 11
      |||||
      |||||

RESULT 15
US-10-371-645-137
; Sequence 137, Application US/10371645
; Publication No. US20030216343A1
; GENERAL INFORMATION:
; APPLICANT: EPIMMUNE Inc.
; APPLICANT: Fikes, John D.
; APPLICANT: Hermanson, Gary G.
; APPLICANT: Sette, Alessandro
; APPLICANT: Ishioka, Glenn Y.
; APPLICANT: Livingston, Brian
; APPLICANT: Chesnut, Robert W.
; APPLICANT: Epimmune Inc.
; TITLE OF INVENTION: Expression Vectors for Stimulating an
; TITLE OF INVENTION: Immune Response and Methods of Using the Same
; FILE REFERENCE: 39963-20022.11
; CURRENT APPLICATION NUMBER: US/10/371,645
; CURRENT FILING DATE: 2003-06-20
; PRIOR APPLICATION NUMBER: US 09/078,904
; PRIOR FILING DATE: 1998-05-13
; PRIOR APPLICATION NUMBER: US 60/085,751
; PRIOR FILING DATE: 1998-05-15
; NUMBER OF SEQ ID NOS: 463
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 137
; LENGTH: 15
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: HBV POL 661 (peptide 1298.06)
US-10-371-645-137

Query Match      100.0%; Score 54; DB 15; Length 15;
Best Local Similarity 100.0%; Pred. No. 0.0038;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      1 QAFTFSPTYK 10
Db      2 QAFTFSPTYK 11
      |||||
      |||||

Search completed: June 28, 2005, 09:18:52
Job time : 159 secs
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